90-910000003

CONTAINS NO CBI

December 13, 1990

U.S. Environmental Protection Agency
401 M Street, SE
Washington, DC 20460

Attention: CAIR Reporting Office

The attached CAIR report is being submitted per 40 CFR Part 704 for the General Electric Facility located in Utica, NY.

If you have any questions or comments please contact Robert Maciel, Senior Environmental Engineer at (315) 793-5678.

Thank you,

Robert Maciel

Robert Maciel, Senior Environmental Engineer

attachment

EPA

Form Approved
OMB No. 2010-0019
Approval Expires 12-31-

CONTAINS NO CBI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Comprehensive Assessment Information Rule

REPORTING FORM

90910000003

EPA-OTS

001034816N

When completed, send this form to:	For Agency Use Only:
Document Processing Center Office of Toxic Substances, TS-790 U.S. Environmental Protection Agency 401 M Street, SW Washington, DC 20460 Attention: CAIR Reporting Office	Date of Receipt: Document Control Number: Docket Number:

OTS DOCUMENT RECEIPT OFC
90 DEC 18 AM 10:04

EPA Form 7710-52

SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been completed in response to the Federal Register Notice of..... [0|6] [1|4] [8|9]
mo. day year

CBI

[ ] a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. ..... [0|0|0|5|8|4]-[8|4]-[9]

b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule ..... NA

(ii) Name of mixture as listed in the rule .... _____

(iii) Trade name as listed in the rule ..... _____

c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of the substance you are reporting on which falls under the listed category.

Name of category as listed in the rule ..... NA

CAS No. of chemical substance ..... [ ][ ][ ][ ][ ][ ]-[ ][ ]-[ ]

Name of chemical substance ..... _____

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI

Manufacturer 1

[ ] Importer 2

Processor 3

X/P manufacturer reporting for customer who is a processor 4

X/P processor reporting for customer who is a processor 5

[ ] Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI

[ ] Yes ..... [X] Go to question 1.04

No ..... [ ] Go to question 1.05

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI

[ ] Yes .....

(No) .....

b. Check the appropriate box below:

[ ] You have chosen to notify your customers of their reporting obligations

Provide the trade name(s) .... NA

[ ] You have chosen to report for your customers

[ ] You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI

[ ] Trade name ..... NA

Is the trade name product a mixture? Circle the appropriate response.

Yes .....

No .....

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI

[ ] "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

ROBERT A. MACIEL	Robert A. Maciel	13 DEC 1998
NAME	SIGNATURE	DATE SIGNED

SR ENVIRONMENTAL ENGINEER	(315) 793 - 5678
TITLE	TELEPHONE NO.

[ ] Mark (X) this box if you attach a continuation sheet.

1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

CBI

[ ]

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

NA

NAME	SIGNATURE	DATE SIGNED
TITLE	( ) - TELEPHONE NO.	DATE OF PREVIOUS SUBMISSION

1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI

[ ]

"My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

NA

NAME	SIGNATURE	DATE SIGNED
TITLE	( ) - TELEPHONE NO.	

[ ] **Mark (X) this box if you attach a continuation sheet.**

PART B CORPORATE DATA

1.09 Facility Identification

CBI Name [G][e][n][e][e][A][ ][C][t][e][ ][T][e][ ][C][O][ ][ ][ ][ ][ ][ ]

[ ] Address [T][E][C][N][H][ ][E][D][A][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[U][T][I][C][A][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
City

[N][Y] [1][3][5][0][3]--[ ][ ][ ][ ]
State Zip

Dun & Bradstreet Number .....[0][0]-[1][3][6]-[7][9][6][0]

EPA ID Number .....[0][0][0][5][2][1][9][7][1]

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ][ ]

Primary Standard Industrial Classification (SIC) Code .....[3][6][6][2]

Other SIC Code .....[ ][ ][ ][ ]

Other SIC Code .....[ ][ ][ ][ ]

1.10 Company Headquarters Identification

CBI Name [G][e][n][e][e][A][ ][E][I][E][C][T][R][I][C][ ][C][O.][ ][ ][ ][ ][ ][ ]

[ ] Address [3][1][3][5][ ][E][A][S][T][ ][N][ ][T][H][ ][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[F][a][i][r][f][i][e][l][d][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
City

[C][T] [0][6][4][3][1]--[ ][ ][ ][ ]
State Zip

Dun & Bradstreet Number .....[0][0]-[1][3][6]-[7][9][6][0]

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ][ ]

[ ] Mark (X) this box if you attach a continuation sheet.

1.11 Parent Company Identification

CBI Name

[ ] Address

Street

City

State Zip

Dun & Bradstreet Number .....

1.12 Technical Contact

CBI Name

[ ] Title

Address

Street

City

State Zip

Telephone Number .....

1.13 This reporting year is from ..... to

Mo. Year Mo. Year

[ ] Mark (X) this box if you attach a continuation sheet.

1.14 Facility Acquired -- If you purchased this facility during the reporting year, provide the following information about the seller:

CBI Name of Seller [ ]

[ ] Mailing Address [ ]
Street

NA [ ]
City

[ ][ ] [ ][ ][ ][ ][ ]--[ ][ ][ ][ ]
State Zip

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ]

Date of Sale .....[ ][ ] [ ][ ] [ ][ ]
Mo. Day Ye

Contact Person [ ]

Telephone Number .....[ ][ ][ ]-[ ][ ][ ]-[ ][ ][ ][ ]

1.15 Facility Sold -- If you sold this facility during the reporting year, provide the following information about the buyer:

CBI Name of Buyer [ ]

[ ] Mailing Address [ ]
Street

NA [ ]
City

[ ][ ] [ ][ ][ ][ ][ ]--[ ][ ][ ][ ]
State Zip

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ]

Date of Purchase .....[ ][ ] [ ][ ] [ ][ ]
Mo. Day Ye

Contact Person [ ]

Telephone Number .....[ ][ ][ ]-[ ][ ][ ]-[ ][ ][ ][ ]

[ ] Mark (X) this box if you attach a continuation sheet.

1.16 For each classification listed below, state the quantity of the listed substance tha was manufactured, imported, or processed at your facility during the reporting year.

CBI	Classification	Quantity (kg yr
[ ]	Manufactured	NA
	Imported	NA
	Processed (include quantity repackaged)	1.95
	Of that quantity manufactured or imported, report that quantity:	
	In storage at the beginning of the reporting year	NA
	For on-site use or processing	NA
	For direct commercial distribution (including export)	NA
	In storage at the end of the reporting year	NA
	Of that quantity processed, report that quantity:	
	In storage at the beginning of the reporting year	("U.K.")
	Processed as a reactant (chemical producer)	0
	Processed as a formulation component (mixture producer)	0
	Processed as an article component (article producer)	1.95
	Repackaged (including export)	0
	In storage at the end of the reporting year	("U.K.")

[X] Mark (X) this box if you attach a continuation sheet.

Reporting Year 1988.

#1 Stepanfoam BH 610 T
2, 4-TDI : 584-84-9

#2 Conastic AD-20 PART A

Calculations
PART A -

16 kits

16 kits x 1 pt (Part A) . $\frac{1 \text{ gal}}{8 \text{ pts}}$ = 2 gals of Part A

2 gal x 0.15 TDI = **0.3 gal TDI**

4.3 gal / year . $\frac{4.536 \text{ kg}}{10 \text{ lbs}}$ = 1.9479

(9A)

PART C IDENTIFICATION OF MIXTURES

1.17 **Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)**

CBI

[ ]

	Component Name	Supplier Name	Average % Composition by Weight (specify precision, e.g., 45% ± 0.5%)
#1	2,4-Toluene Diisocyanate	Stepan Co	94%
	("U.K.")	Stepan Co.	6%
		Total	100%

100%

[X] **Mark (X) this box if you attach a continuation sheet.**

PART C IDENTIFICATION OF MIXTURES

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

CBI

[ ]

Component Name	Supplier Name	Average % Composition by Weight (specify precision, e.g., 45% ± 0.5%)
2,4-Toluen Diisocyanate	Conap, Inc.	15%
("U.K.")	Conap, Inc.	85%
	Total	100%

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 2 MANUFACTURER, IMPORTER, AND PROCESSOR VOLUME AND USE

2.01 State the total number of years, including the reporting year, that your facility ma
CBI manufactured, imported, or processed the listed substance.

[ ]

Number of years manufactured ..... N.A. yes

Number of years imported ..... N.A. yes

Number of years processed ..... 31 yes

2.02 State the quantity of the listed substance that your facility manufactured, importe
or processed during the corporate fiscal year preceding the reporting year.

CBI

[ ]

Year ending ..... [1][2] Mo. [8][7] Year

Quantity manufactured ..... NA k

Quantity imported ..... NA k

Quantity processed ..... 1.95 kg. k

2.03 State the quantity of the listed substance that your facility manufactured, imported
or processed during the 2 corporate fiscal years preceding the reporting year in
descending order.

CBI

[ ]

Year ending ..... [1][2] Mo. [8][7] Year

Quantity manufactured ..... NA k

Quantity imported ..... NA k

Quantity processed ..... 1.95 kg. k

Year ending ..... [1][2] Mo. [8][6] Year

Quantity manufactured ..... NA k

Quantity imported ..... NA k

Quantity processed ..... ("U.K.") k

[ ] Mark (X) this box if you attach a continuation sheet.

2.04 State the quantity of the listed substance that your facility manufactured, imported or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

[ ] Year ending ..... [1][2] Mo. [8][7] Year

Quantity manufactured ..... NA kg

Quantity imported ..... NA kg

Quantity processed ..... 1.95 kg

Year ending ..... [1][2] Mo. [8][6] Year

Quantity manufactured ..... NA kg

Quantity imported ..... NA kg

Quantity processed ..... ("U.K.") kg

Year ending ..... [1][2] Mo. [8][5] Year

Quantity manufactured ..... NA kg

Quantity imported ..... NA kg

Quantity processed ..... ("U.K.") kg

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

[ ]

NA

Continuous process 1

Semicontinuous process 2

Batch process 3

[ ] **Mark (X) this box if you attach a continuation sheet.**

2.06 CBI Specify the manner in which you processed the listed substance. Circle all appropriate process types.

[ ]

Continuous process .....

Semicontinuous process .....

Batch process .....

2.07 CBI State your facility's name-plate capacity for manufacturing or processing the liste substance. (If you are a batch manufacturer or batch processor, do not answer this question.)

[ ]

Manufacturing capacity ..... N.A. _____ kg

Processing capacity ..... _____ kg

2.08 CBI If you intend to increase or decrease the quantity of the listed substance manufactured, imported, or processed at any time after your current corporate fiscal year, estimate the increase or decrease based upon the reporting year's production volume.

[ ]

	Manufacturing Quantity (kg)	Importing Quantity (kg)	Processing Quantity (kg)
Amount of increase	NA	NA	NA
Amount of decrease	NA	NA	0.136 Kg

[ ] **Mark (X) this box if you attach a continuation sheet.**

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

[ ]

	Days/Year	Average Hours Da
Process Type #1 (The process type involving the largest quantity of the listed substance.)		
Manufactured	NA	
Processed	50	8
Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)		
Manufactured	NA	
Processed	NA	
Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)		
Manufactured	NA	
Processed	NA	

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

[ ]

Maximum daily inventory	("U.K.")	k
Average monthly inventory	("U.K.")	k

[ ] **Mark (X) this box if you attach a continuation sheet.**

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI

[ ]

NA

CAS No.	Chemical Name	Byproduct, Coproduct or Impurity[1]	Concentration (%) (specify ± % precision)	Source of Byproducts, Coproducts, or Impurities

[1]Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct
C = Coproduct
I = Impurity

[ ] **Mark (X) this box if you attach a continuation sheet.**

2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of t total volume of listed substance used during the reporting year. Also list the CBI quantity of listed substance used captively on-site as a percentage of the value [ ] listed under column b., and the types of end-users for each product type. (Refer t the instructions for further explanation and an example.)

a. Product Types[1]	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users[2]
K	100%	0%	H

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additive
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additive
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) U.S. Federal Defense

[ ] Mark (X) this box if you attach a continuation sheet.

2.13 Expected Product Types -- Identify all product types which you expect to manufacture, import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufacture, import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI
[ ]

a. Product Types[1]	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users[2]
J	100%	0%	H

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additive
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additive
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) US Federal/Defense

[ ] Mark (X) this box if you attach a continuation sheet.

2.1 Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.

CBI

[ ]

a. Product Type[1]	b. Final Product's Physical Form[2]	c. Average % Composition of Listed Substance in Final Product	d. Type of End-Users[3]

N/A

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/ Sensitizer
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additive
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additive
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the final product's physical form:

A = Gas
B = Liquid
C = Aqueous solution
D = Paste
E = Slurry
F1 = Powder
F2 = Crystalline solid
F3 = Granules
F4 = Other solid
G = Gel
H = Other (specify) _____

[3]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

2.15 CBI Circle all applicable modes of transportation used to deliver bulk shipments of the listed substance to off-site customers.

[ ] Truck .....

Railcar .....

Barge, Vessel .....

Pipeline .....

Plane .....

Other (specify) _____ .....

NA

2.16 CBI Customer Use -- Estimate the quantity of the listed substance used by your customers or prepared by your customers during the reporting year for use under each category of end use listed (i-iv).

[ ]

Category of End Use

NA

i. Industrial Products

Chemical or mixture ..... _____ kg/y

Article ..... _____ kg/y

ii. Commercial Products

Chemical or mixture ..... _____ kg/y

Article ..... _____ kg/y

iii. Consumer Products

Chemical or mixture ..... _____ kg/y

Article ..... _____ kg/y

iv. Other

Distribution (excluding export) ..... _____ kg/y

Export ..... _____ kg/y

Quantity of substance consumed as reactant ..... _____ kg/y

Unknown customer uses ..... _____ kg/y

[ ] Mark (X) this box if you attach a continuation sheet.

2.17 State the quantity of the listed substance that you exported during the reporting year.

CBI

[ ]

In bulk ..... _____ kg

As a mixture ..... _____ kg

In articles ..... _____ kg

NA

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION

PART A GENERAL DATA

3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.
CBI The average price is the market value of the product that was traded for the listed substance.
[ ]

Source of Supply	Quantity (kg)	Average Price ($/kg)
The listed substance was manufactured on-site.		
The listed substance was transferred from a different company site.		
The listed substance was purchased directly from a manufacturer or importer.		
The listed substance was purchased from a distributor or repackager.	1.95	$285.90
The listed substance was purchased from a mixture producer.		

3.02 Circle all applicable modes of transportation used to deliver the listed substance to your facility.
CBI
[ ]

Truck .....
Railcar .....
Barge, Vessel .....
Pipeline .....
Plane .....
Other (specify) _____ .....

[X] Mark (X) this box if you attach a continuation sheet.

STEPANFOAM

$\$162.80/gal \cdot 4\,gal \cdot \frac{453\,kg}{10\,gal} = \$294.99\,kg$

(Conastic – $31.35/kit)

$\$\frac{31.35}{kit} \cdot \frac{1\,kit}{2\,parts} \cdot \frac{1\,part}{1\,pt} \cdot \frac{8\,pts}{gal} \cdot \frac{10\,gal}{453\,kg} =$

276.82 kg

$\$294.99 + 276.82 = \$571.81$

$Average = \frac{\$571.81}{2} = \$285.90$

(21 A)

3.03 a. Circle all applicable containers used to transport the listed substance to your facility.

CBI

[ ]

Bags 1

Boxes 2

Free standing tank cylinders 3

Tank rail cars 4

Hopper cars 5

Tank trucks 6

Hopper trucks 7

Drums 8

Pipeline 9

Other (specify) _____ 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

NA

Tank cylinders ..... _____ mmHg

Tank rail cars ..... _____ mmHg

Tank trucks ..... _____ mmHg

[ ] **Mark (X) this box if you attach a continuation sheet.**

PART B RAW MATERIAL IN THE FORM OF A MIXTURE

3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.

CBI

[_]

	Trade Name	Supplier or Manufacturer	Average % Composition by Weight (specify ± % precision)	Amount Processed (kg/yr)
#1	Stephanfoam BH-610T	Stepan Co.	94%	1.812
#2	Conastic AD-20 PART A	Conap, Inc	15%	0.136

[_] Mark (X) this box if you attach a continuation sheet.

PART C RAW MATERIAL VOLUME

3.05 CBI [ ] State the quantity of the listed substance used as a raw material during the reporting year in the form of a class I chemical, class II chemical, or polymer, and the percent composition, by weight, of the listed substance.

	Quantity Used (kg/yr)	% Composition by Weight of Listed Substance in Raw Material (specify ± % precision)
Class I chemical	("U.K.")	("U.K.")
Class II chemical		
Polymer		

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Section 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

PART A PHYSICAL/CHEMICAL DATA SUMMARY

4.01 Specify the percent purity for the three major[1] technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

CBI

[ ] ("NA -- MIXTURE")

	Manufacture	Import	Process
Technical grade #1	_____% purity	_____% purity	_____% purity
Technical grade #2	_____% purity	_____% purity	_____% purity
Technical grade #3	_____% purity	_____% purity	_____% purity

[1]Major = Greatest quantity of listed substance manufactured, imported or processed.

4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you possess an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

(Yes) .....

No .....

Indicate whether the MSDS was developed by your company or by a different source.

Your company .....

(Another source .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS) that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Yes .....

No .....

4.04 For each activity that uses the listed substance, circle all the applicable number(s) corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

[ ]

	Physical State				
Activity	Solid	Slurry	Liquid	Liquified Gas	Gas
Manufacture	1	2	3	4	5
Import	1	2	3	4	5
Process	1	2	3	4	5
Store	1	2	3	4	5
Dispose	1	2	3	4	5
Transport	1	2	3	4	5

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.05 Particle Size -- If the listed substance exists in particulate form during any of t following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles ≥10 microns in diameter. Measure the physical state and particle sizes fo importing and processing activities at the time you import or begin to process the CBI listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

[ ]

N/A

Physical State		Manufacture	Import	Process	Store	Dispose	Transpor
Dust	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Powder	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Fiber	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Aerosol	<1 micron						
	1 to <5 microns						
	5 to <10 microns						

[ ] **Mark (X) this box if you attach a continuation sheet.**

PART B FIRE, EXPLOSION, AND OTHER HAZARD DATA

4.06 For each physical state of the listed substance, specify the corresponding flashpoint, and the test method used to derive the flashpoint value.

Solid

Flashpoint ..... See MSDS ..... °

Test method ..... See MSDS .....

Liquid

Flashpoint ..... °

Test method .....

Gas/Vapor

Flashpoint ..... °

Test method .....

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

4.07 Indicate the temperature at which the listed substance undergoes autopolymerization or autodecomposition.

Autopolymerizes at ..... °

Autodecomposes at ..... °

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

[ ] Mark (X) this box if you attach a continuation sheet.

4.08 Indicate the flammable limits in air (% by volume) for the listed substance at standard temperature and pressure.

Lower limit ..... _____

Upper limit ..... _____

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.09 Extinguishing Media -- Identify (Y/N/NA/UK) all known methods for extinguishing flames caused by each product type which contains the listed substance. (Refer to the instructions for the definition of Y, N, NA and UK.)

Extinguishing Media	Product Types Containing the Listed Substance[1]					
	1	2	3	4	5	6
Water	____	____	____	____	____	____
Foam	____	____	____	____	____	____
CO_2	____	____	____	____	____	____
Dry chemical (e.g., sodium bicarbonate)	____	____	____	____	____	____
Halogenated hydrocarbon (e.g., carbon tetrachloride, methyl bromide)	____	____	____	____	____	____
Other (specify) _____	____	____	____	____	____	____

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

---

[1] Identify the product types listed under each column (1-6) in the following table:

Product Type No.	Product Type Identity
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.10 Special Firefighting Procedures -- Identify (Y/N/NA/UK) all known restrictions on firefighting procedures used to combat fires caused by each product type which contains the listed substance. (Refer to the instructions for definitions of Y, N, NA and UK.)

	Product Types Containing the Listed Substance[1]					
Special Firefighting Procedures	1	2	3	4	5	6
Do not use water	____	____	____	____	____	____
Do not increase air pressure	____	____	____	____	____	____
Other (specify) _____	____	____	____	____	____	____

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

---

[1]Identify the product types listed under each column (1-6) in the following table:

Product Type No.	Product Type Identity
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.11 Incompatibility -- List all chemicals, materials, or categories of chemicals or materials that you know are incompatible with the listed substance and the reason why they are incompatible. (Refer to the instructions for further explanation and an example.)

CAS No.	Name	Reaction (specify)

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

4.12 Autoxidation -- Is the listed substance capable of autoxidation? Circle the appropriate response.

Yes 1

No 2

Unknown 3

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.13 Indicate the autoignition temperature for the listed substance and the test method used to derive this value.

Autoignition temperature ..... _____

Test method ..... _____

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

4.14 Vapor in Cargo Tanks -- If storing the listed substance in a cargo tank causes vapor problems, such as peroxide formation, reaction with moisture, etc., specify the problem and necessary controls or restrictions used to remedy each problem.

Vapor Problem	Controls/Restrictions
Peroxide formation	
Reaction with moisture	
Combustion	
Other (specify)	

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

4.15 Shipment Procedures -- If you use an inhibitor or stabilizer when shipping the listed substance in bulk form, specify its name, whether it inhibits or stabilizes the listed substance, the amount normally added, and the duration of its effectiveness.

CBI

[ ]

Name of Additive	Inhibitor or Stabilizer[1]	Amount Normally Added (ppm or %)	Duration of Effectiveness (specify units)

Indicate if hazard information/MSDS has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

---

[1]Use the following codes to designate inhibitor and stabilizer:

I = Inhibitor
S = Stabilizer

[X] **Mark (X) this box if you attach a continuation sheet.**

STEPANFOAM BH-610-

GENERAL ELECTRIC CO
831 BOARD STREET
UTICA NY 13503

34405 00 MATERIAL SAFETY DATA SHEET

DATE: 11/04/88 CUST # 26750-710 P.O.# F12P4419011524 PAGE: 1
PRODUCT NUMBER: 188478 PRODUCT NAME: STEPANFOAM BH-610-T

STEPAN COMPANY
NORTHFIELD, IL. 60093
(312) 446-7500

EMERGENCY INFORMATION
MEDICAL: 1-800-228-5635
CHEMTREC: 1-800-424-9300

SECTION I: GENERAL INFORMATION

PRODUCT NUMBER: 188478 PRODUCT NAME: STEPANFOAM BH-610-T
PRODUCT CLASS: TOLUENE DIISOCYANATE.
PRECAUTIONS: POISON.
REFER TO BILL OF LADING OR CONTAINER LABEL FOR DOT OR OTHER TRANSPORTATION HAZARD CLASSIFICATION, IF ANY.

SECTION II: HAZARDOUS INGREDIENTS

INGREDIENT (CAS #)	OSHA PEL (PPM)	ACGIH TLV (PPM)	OTHER
TOLUENE-2,4-DIISOCYANATE (TDI) (C) (584-84-9) 94%	0.02	0.005	

NE = NOT ESTABLISHED.
NL = NOT LISTED.
(C) = IDENTIFIED AS A CARCINOGEN BY OSHA, IARC, OR NTP.

SECTION III: PHYSICAL/CHEMICAL DATA

(CONTINUED)

STEPANFOAM BH-610-

BOILING POINT:
OVER 200 DEG F. (93 DEG C.).
% VOLATILE BY WEIGHT:
NIL
EVAPORATION RATE: ESTIMATED SLOWER THAN ETHYL ETHER.

VAPOR DENSITY: ESTIMATED HEAVIER THAN AIR.
WEIGHT PER GALLON:
10.0 LBS.

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (SETA FLASH CLOSED CUP):
OVER 200 DEG F. (93 DEG C.).
EXPLOSIVE LIMITS:
LOWER:
1%
EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, FOAM, OR WATER FOG. CLASS BC, ABC FIRE EXTINGUISHER.
SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED POSITIVE PRESSURE BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN.

SECTION V: REACTIVITY DATA

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
INCOMPATABILITY (MATERIALS TO AVOID):
STRONG OXIDIZING AGENTS
WATER, ALCOHOLS, AMINES, ALKALIES, METAL COMPOUNDS (CATALYSTS).
HAZARDOUS DECOMPOSITION PRODUCTS:
CYANIDES AND AMMONIA MAY BE FORMED.

SECTION VI: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE/EMERGENCY AND FIRST AID PROCEDURES

EYES: CONTACT WITH EYES IS PAINFUL AND IRRITATING.
FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

(CONTINUED)

SKIN: PROLONGED OR REPEATED CONTACT WITH SKIN CAUSES IRRITATION. WASH OFF SKIN WITH WATER. REMOVE CONTAMINATED CLOTHING AND CLEAN BEFORE REUSE.

INHALATION: MIST CAUSED BY MANUFACTURING OPERATIONS IRRITATES NASAL PASSAGES.
IF VAPORS OR MIST CAUSE IRRITATION OR DISTRESS, REMOVE TO FRESH AIR.
GIVE OXYGEN OR APPLY ARTIFICIAL RESPIRATION, IF NEEDED.

INGESTION: IF SWALLOWED, CONSULT A PHYSICIAN IMMEDIATELY.

CHRONIC EFFECTS AND MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
CHRONIC EFFECTS AND MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE TO THIS PRODUCT HAVE NOT BEEN ESTABLISHED. UNNECESSARY EXPOSURE TO THIS PRODUCT OR ANY CHEMICAL SHOULD BE AVOIDED.

IF ANY SYMPTOMS PERSIST, CONSULT A PHYSICIAN.
IN A NATIONAL TOXICOLOGY PROGRAM (NTP) STUDY, TDI WAS CARCINOGENIC WHEN GIVEN ORALLY TO RATS AND MICE AT MAXIMUM TOLERATED DOSES. TDI WAS NOT CARCINOGENIC TO RATS IN A TWO-YEAR INHALATION STUDY.
SEE SECTION II FOR HAZARDOUS INGREDIENTS PRESENT IN THIS PRODUCT AND THEIR CORRESPONDING THRESHOLD LIMIT VALUES.

****
FOR ADDITIONAL MEDICAL INFORMATION, CALL 1-800-228-5635
****

SECTION VII: SPILL, LEAK, AND DISPOSAL PROCEDURES

CONTAIN ALL SPILLS AND LEAKS TO PREVENT DISCHARGE INTO THE ENVIRONMENT.
VENTILATE AREA.

SMALL SPILLS: SOAK UP WITH ABSORBANT, SHOVEL INTO WASTE CONTAINER, FLUSH AREA WITH WATER.

LARGE SPILLS: RECOVER LIQUID FOR REPROCESSING OR DISPOSAL.

WASTE DISPOSAL: RECOVER MATERIAL OR DISPOSE (INCINERATION IS PREFERRED) IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. MATERIAL COLLECTED WITH ABSORBANT MAY BE DISPOSED IN A PERMITTED LANDFILL IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. EMPTY CONTAINER MAY RETAIN VAPOR OR PRODUCT RESIDUE. OBSERVE ALL LABELED SAFEGUARDS UNTIL CONTAINER IS CLEANED, RECONDITIONED, OR DESTROYED.

(CONTINUED)

SECTION VIII: PROTECTIVE MEASURES

EYE PROTECTION: WEAR FULL FACE SHIELD OR GOGGLES WHEN HANDLING.
PROTECTIVE GLOVES: USE IMPERVIOUS GLOVES.
RESPIRATORY PROTECTION:
IF VAPORS ARE PRESENT, USE NIOSH OR MSHA APPROVED RESPIRATOR FOR ORGANIC VAPORS, AIR-LINE RESPIRATOR, OR A SELF-CONTAINED BREATHING APPARATUS.
VENTILATION:
USE VENTILATION ADEQUATE TO KEEP HAZARDOUS INGREDIENTS BELOW THEIR TLV (SEE SECTION II).
OTHER PROTECTIVE EQUIPMENT:
WEAR PROTECTIVE CLOTHING TO PREVENT REPEATED OR PROLONGED CONTACT.
EYE WASH STATION AND SAFETY SHOWER SHOULD BE NEAR WORK AREA.

SECTION IX: SPECIAL PRECAUTIONS

HANDLING AND STORAGE:
AVOID OVERHEATING OR FREEZING.
AVOID OPEN FIRE OR FLAME.
OTHER PRECAUTIONS:
SPILLED MATERIAL IS SLIPPERY. WASH THOROUGHLY AFTER HANDLING. IF INGESTED, CALL A PHYSICIAN.

DO NOT POUR INTO DRAINS, AS SOLIDS THAT FORM WILL PLUG SEWERS.
1% AMMONIA MAY BE USED TO NEUTRALIZE SPILLS.

C O N A P I N C .
1405 Buffalo St.
Olean, New York 14760
716/372-9650

========== MATERIAL SAFETY DATA SHEET ==========

Note: This form is to be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Blank spaces are not permitted.

========== I. IDENTIFICATION ==========

Trade Name Conastic AD-20 Part A Date:5/25/89

Chemical Name, common name: Complex Mixture; Polyurethane Prepolymer

========== II. HAZARDOUS INGREDIENTS ==========

Chemical Names	CAS No.	%	ACGIH(TLV)	OSHA(PEL)	Other
Toluene 2,4 Diisocyanate	584-84-9	<15%	.005ppmTWA .005ppm TWA	.02ppmSTEL	ND

Material may present a dust hazard if cut, ground or machined after curing.

========== III. PHYSICAL DATA ==========

Boiling Point	ND	Specific Gravity (H2O=1)	1.06
Vapor Pressure,mm Hg	ND	Vapor Density (air=1)	ND
Melting Pt./Range	ND	Evaporation rate (Ether=1)	ND
Solubility in Water:	REACTS	Physical State:	LIQUID

Percent volatile by volume:Negligible

Appearance and Odor: Liquid; For TDI Sharp pungent (odor threshold greater than TLV)

========== IV. FIRE AND EXPLOSION DATA ==========

Flash Point,F (Method): > 260 F PMCC

Flammable Limits ND LEL ND UEL ND

Extinguishing Materials:

-XX-Water Spray -XX-Dry Chemical -XX-Carbon Dioxide
-XX-Foam -ND-Other:

Special Firefighting Procedures/Unusual Fire or Explosion Hazards:

Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. No skin surface should be exposed. During a fire TDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 350 F TDI forms carbodiimides with the release of CO2 which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.

========== V. HEALTH HAZARD INFORMATION ==========

ACUTE TOXICITY (Routes of entry)

Inhalation:

LC50.(4 hr.): Range 16-50ppm for 1-4 hr (Rat) on TDI. TDI

vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis. bronchial spasm and pulmonary edema (fluid in the lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills),has also been reported. These symptoms can be delayed up to several hours after exposure.

Ingestion:

ORAL,LD50 > 5800 mg/kg (Rats). Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Eye Contact:

Strongly irritating (Rabbits) OECD Guidelines. Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. however, damage is usually reversible.

Skin Contact:

Skin sensitizer in guinea pigs. One study with guinea pigs reported that repeated skin contact with TDI caused respiratory sensitization. Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

Skin Absorption:

ND

CHRONIC TOXICITY

Carcinogenicity:

--X-Yes: --X---NTP --X----IARC ----Federal OSHA

In a DRAFT of a lifetime bioassay, the National Toxicology Program reported that TDI caused an increase in the number of tumors in exposed rats over those counted in non-exposed rats. The TDI was administered by gavage where TDI was introduced into the stomach through a tube. In lifetime inhalation studies conducted by Hazelton Labs for the International Isocyanate Institute, TDI did NOT demonstrate carcinogenic activity in rats or mice.

Target Organ Affected:

No specific information available.

Effects of Overexposure:

Inhalation:
Inhalation of TDI vapors at concentrations above allowable limits can produce irritation of the mucous membranes in the respiratory tract resulting in running nose, sore throat, productive cough and a reduction in lung function (breathing obstruction). As a result of previous repeated overexposures or a single large dose, certain individuals may develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Another type of response is hyperreactivity or hypersensitivity, in which persons, (as a result of a previous repeated overexposure or large single dose),can respond to small TDI concentrations at levels well below the .02ppm. Symptoms could be immediate or delayed and include chest tightness, wheezing, cough, shortness of breath or asthmatic attack. Hypersensitivity pneumonitis (with similar respiratory symptoms and fever which has been delayed) has also been reported. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanate has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.
Eyes:
Liquid, vapors or aerosols are severely irritating to the eyes and can cause tears. Prolonged vapor contact may cause conjunctivitis. Corneal injury can occur which can be slow to heal; however damage is usually reversible.
Skin:
TDI reacts with skin protein and tissue moisture and can cause localized irritation as well as discoloration. Prolonged contact could produce reddening, swelling, or blistering and, in some individuals, skin sensitization resulting in dermatitis. Once sensitized a individual can develop recurring symptoms as a result of exposure to vapor.
Ingestion:
Ingestion could result in irritation and some corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

Medical Conditions Aggravated By Exposure
Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperreactivity), skin allergies, eczema.

FIRST AID: EMERGENCY PROCEDURES
Eye Contact:
Flush with clean, lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids, and obtain medical attention. Refer individual to an ophthalmologist for immediate follow-up.
Skin Contact:
Remove contaminated clothing. Wash effected areas thoroughly with soap or tincture of green soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower, remove clothing under shower,get medical attention, and consult physician.
Inhalation:
Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and be immediate or delayed up to several hours. Consult physician.
Ingested:
Do not induce vomiting. Give 12 fl. oz. of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.
Recommendations to Physician:
Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision. This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. There is no specific antidote for ingestion treat symptomatically. Inducing vomiting is contraindicated because of the irritating nature of this compound. TDI is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

========== VI. REACTIVITY DATA ==========

Stability: --XX-Stable -NA--Unstable
Conditions to Avoid: Temperatures higher than recommended in product literature.
Incompatibility (materials to avoid):
Water, short chain alcohols, amines
Hazardous Decomposition Products
By heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen and traces of hydrogen cyanide, TDI.
Hazardous Polymerization:NA-May Occur X-Will not occur
Conditions to avoid:
ND

======== VII. SPILL, LEAK AND DISPOSAL PROCEDURES =======

Steps to be taken if material is released or spilled:
Consult section VIII for proper protective equipment.

Cover the spill with sawdust, vermiculite, Fuller's earth or other absorbent material. Pour decontamination solution over the spill area and allow to react for at least 10 minutes. Collect the material in open top containers and add additional amounts of decontamination solution. Remove containers to a safe place, cover loosely, and allow to stand for 24 to 48 hours. Wash down spill area with decontamination solutions. Decontamination solutions: non-ionic surfactant Union Carbide's Tergitol TMN-10(20%) and water (80%); or concentrated ammonia (3-8%), detergent (2%), and water (90%). During spill clean-up, a self contained breathing apparatus or air line respirator and protective clothing must be worn. (See section VIII).
Reportable Quantity CERCLA: 100lbs
Waste Disposal Method:
Dispose according to any Local, State and Federal Regulations.

========== VIII. SPECIAL HANDLING INFORMATION ==========

Respiratory Protection:
A positive pressure air-supplied respirator is required whenever TDI concentrations exceed the Short-Term Exposure or Ceiling Limit of .02ppm or exceed the 8 hour Time Weighted Average TLV of 0.005 ppm. An air supplied respirator must also be worn during spray application, even if exhaust ventilation is used. For non-spray , short-term(less than 1 hour) situations where concentrations are near the TLV, a full face, air-purifying respirator equipped with organic cartridges or canisters can be used. However, TDI has poor warning properties since the odor at which TDI can be smelled is substantially higher than the 0.02 ppm. Therefore, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use. (29CFR 1910.134).
Ventilation:
Local exhaust should be used to maintain levels below the TLV whenever TDI containing material is handled, processed, or spray-applied. At normal room temperatures (70 F) TDI levels quickly exceed the TLV unless properly ventilated. Standard reference sources regarding industrial ventilation (e.g.,ACGIH INDUSTRIAL VENTILATION) should be consulted for guidance about adequate ventilation.
Protective Gloves:Chemical resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water.
Eye Protection:
Liquid chemical goggles or full face shield should be worn. Contact lenses should not be worn.
Other Protective Clothing or Equipment:Safety showers and eyewash stations should be available. Cover as much of exposed skin as possible with appropriate clothing.

Work Practices, hygienic practices
Educate and train employees in safe use of product. Follow all label instructions.

IX SPECIAL PRECAUTIONS

Handling and Storage:
Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspect.
Other Precautions:
Avoid contact with eyes and skin. Do not breathe the vapors.

X ADDITIONAL INFORMATION

SARA Title III Requirements:
TDI is on the Extremely Hazardous Substance.

Chemical Name	Section: 302	CERCLA 313
Toluene 2,4 Diisocyanate	TPQ-500 LBS	RQ-100 LBS	YES

T.S.C.A. Status: On Inventory

Name(print): George C. Karpin
Signature: George C. Karpin
Title: Toxicological Coordinator
Date of last revision 5/25/89

!This formulation is subject !to change without notice. !In case of accident use the !phone number provided.

To the best of our knowledge, the information contained herein is accurate and meets all state and federal guidelines. However, CONAP INC. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of the suitability of any material is the sole responsibility of the user.

Date approved 5/25/89 Approved: [signature]
ND=Not Determined
NA=Not Applicable
5/25/89 Approved: [signature]

SECTION 5 ENVIRONMENTAL FATE

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

5.01 Indicate the rate constants for the following transformation processes.

a. Photolysis:

Absorption spectrum coefficient (peak) .... (UK) (1/M cm) at _____ nm

Reaction quantum yield, ϕ ..... (UK) at _____ nm

Direct photolysis rate constant, k_p, at ... (UK) 1/hr _____ latitud

b. Oxidation constants at 25°C:

For $^1O_2$ (singlet oxygen), k_{ox} ..... (UK) 1/M

For RO_2 (peroxy radical), k_{ox} ..... (UK) 1/M

c. Five-day biochemical oxygen demand, BOD_5 ... (UK) mg/l

d. Biotransformation rate constant:

For bacterial transformation in water, k_b... UK 1/hr

Specify culture ..... UK

e. Hydrolysis rate constants:

For base-promoted process, k_B ..... UK 1/M

For acid-promoted process, k_A ..... UK 1/M

For neutral process, k_N ..... UK 1/hr

f. Chemical reduction rate (specify conditions) UK

g. Other (such as spontaneous degradation) ... UK

Note: All Environmental Fate data is UK according to manufacturers Stepan & Conap

[ ] Mark (X) this box if you attach a continuation sheet.

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

Media	Half-life (specify units)
Groundwater	(UK)
Atmosphere	
Surface water	
Soil	

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours.

CAS No.	Name	Half-life (specify units)	Media
(UK)			in
			in
			in
			in

5.03 Specify the octanol-water partition coefficient, K_{ow} ... (UK) at 25°C

Method of calculation or determination .....

5.04 Specify the soil-water partition coefficient, K_d ..... (UK) at 25°C

Soil type .....

5.05 **Specify the organic carbon-water partition coefficient, K_{oc}** ..... (UK) at 25°C

5.06 **Specify the Henry's Law Constant, H** ..... (UK) atm-m^3/mole

[ ] **Mark (X) this box if you attach a continuation sheet.**

5.07 List the bioconcentration factor (BCF) of the listed substance, the species for whic it was determined, and the type of test used in deriving the BCF.

Bioconcentration Factor	Species	Test[1]
(UK)		

[1]Use the following codes to designate the type of test:

F = Flowthrough
S = Static

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 6 ECONOMIC AND FINANCIAL INFORMATION

6.01 Company Type -- Circle the number which most appropriately describes your company.

CBI

[ ]

Corporation 1

Sole proprietorship 2

Partnership 3

Other (specify) _____ 4

6.02 At the end of the reporting year, were you constructing additional facilities at this site that were not yet in operation at the end of the reporting year, but which are now being used or will be used in the future for manufacturing, importing, or processing the listed substance? Circle the appropriate response.

CBI

[ ] Yes 1

No 2

6.03 List all of the product types that you manufacture that contain the listed substance as a raw material, and the percentage of the name-plate capacity dedicated to the listed substance that each product type represents. The total of all capacity percentiles should equal 100 percent. State the total name-plate capacity of the process type(s) used to manufacture all product types that contain the listed substance.

CBI

[ ]

Product Type	% Total Capacity
N/A	

State the total name-plate capacity of the process type(s) used to manufacture all product types that contain the listed substance: _____ kg/yr

[ ] **Mark (X) this box if you attach a continuation sheet.**

6.04 CBI [ ] For each market listed below, state the quantity sold and the total sales value of the listed substance sold or transferred in bulk during the reporting year.

NA

Market	Quantity Sold or Transferred (kg/yr)	Total Sales Value ($/yr)
Retail sales		
Distribution -- Wholesalers		
Distribution -- Retailers		
Intra-company transfer		
Repackagers		
Mixture producers		
Article producers		
Other chemical manufacturers or processors		
Exporters		
Other (specify)		

6.05 CBI [ ] Substitutes -- List all known commercially feasible substitutes that you know exist for the listed substance and state the cost of each substitute. A commercially feasible substitute is one which is economically and technologically feasible to use in your current operation, and which results in a final product with comparable performance in its end uses.

Substitute	Cost ($/kg)
NONE	

[ ] **Mark (X) this box if you attach a continuation sheet.**

6.06 CBI [ ] State your average total and variable costs of manufacturing, importing, and processing the listed substance during the reporting year. (For an explanation of these costs, refer to the instructions.)

Average Total Costs

Manufacturing ..... _____ $/k

Importing ..... _____ $/k

Processing ..... (UK) $/k

Average Variable Costs

Manufacturing ..... _____ $/k

Importing ..... _____ $/k

Processing ..... (UK) $/k

6.07 State your average purchase price of the listed substance, if purchased as a raw material during the reporting year.

CBI

[ ] Average purchase price ..... $285.90 $/k

6.08 CBI State your company's total sales and sales of the listed substance sold in bulk for the reporting year.

[ ]

Year ending ..... [ ][ ] Mo. [ ][ ] Year

Company's total sales ($) ..... _____

Sales of listed substance ($) ..... NA

[ ] **Mark (X) this box if you attach a continuation sheet.**

6.09 State your company's total sales and sales of the listed substance sold in bulk for the corporate fiscal year preceding the reporting year. (Refer to the instructions for question 6.08 for the methodology used to answer this question.)

CBI

[ ]

NA

Year ending ..... [ ][ ] Mo. [ ][ ] Year

Company's total sales ($) .....

Sales of listed substance ($) ..... NA

6.10 State your company's total sales and sales of the listed substance sold in bulk for the 2 corporate fiscal years preceding the reporting year in descending order. (Refer to the instructions for question 6.08 for the methodology used to answer this question.)

CBI

[ ]

NA

Year ending ..... [ ][ ] Mo. [ ][ ] Year

Company's total sales ($) .....

Sales of listed substance ($) .....

Year ending ..... [ ][ ] Mo. [ ][ ] Year

Company's total sales ($) .....

Sales of listed substance ($) .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

General Instructions:

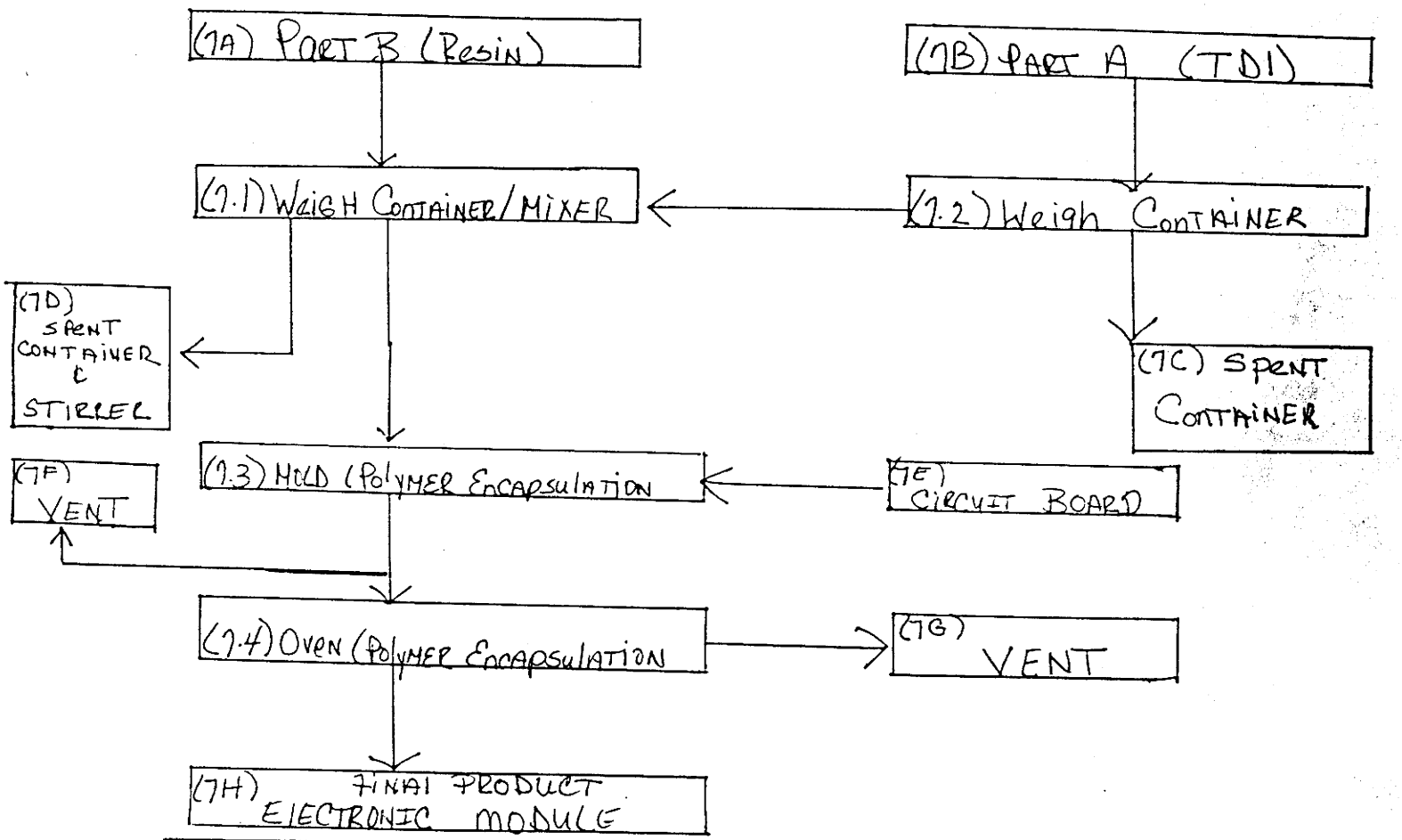
For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

CBI

Process type ..... Encapsulation



[ ] Mark (X) this box if you attach a continuation sheet.

7.02 In accordance with the instructions, provide a separate process block flow diagram showing each of the three major (greatest volume) process types involving the listed substance.

CBI

[ ] Process type .....

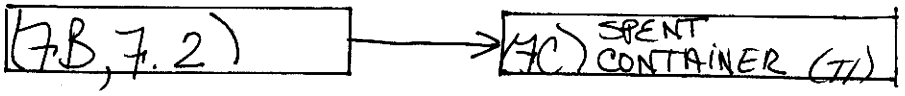
(NA)

[ ] Mark (X) this box if you attach a continuation sheet.

7.03 In accordance with the instructions, provide a process block flow diagram showing a process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

[ ] Process type ..... ENCAPSULATING

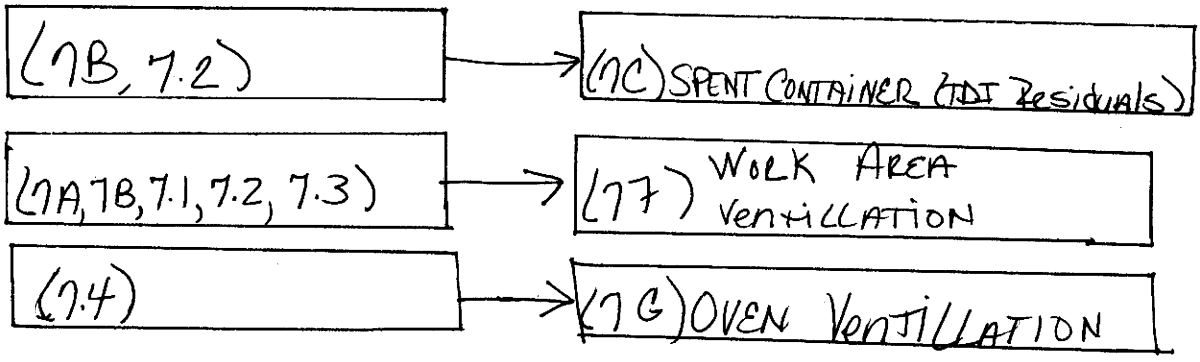


[X] **Mark (X) this box if you attach a continuation sheet.**

7.03 In accordance with the instructions, provide a process block flow diagram showing a process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if no treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

[ ] Process type ..... ENCAPSULATING



[ ] Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Encapsulating

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
7.1	Cup	Ambient	Atmospheric	Paper
7.2	"	"	"	"
7.3(a)	MOLD	"	"	aluminum
(b)	MOLD	"	"	Rubber
7.4	oven	60°C	"	steel

[ ] **Mark (X) this box if you attach a continuation sheet.**

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Encapsulating

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
7A	Raw Mat'l - Resin	OL	(U.K.)
7B	Raw Mat'l - BH-6187	OL	1.812
7C	Spent Container	SO	(U.K.)
7D	Spent Container Sticker	SO	(U.K.)
7E	Circuit Board	SO	NA
7F	Vent - Worker Area	GU	(U.K.)
7G	Oven Vent	GU	(U.K.)
7H	Electronic Module	SO	NA

[1] Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[ ] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocc this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Encapsulating

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
1A	(Resin) (UK)	UK		
1B	REACTANT 2,4-TDI	94% (E)	CO_2	(UK)
1C	Residual 2,4-TDI	94% (E)		
1D	Residual encapsulation PRODUCT	NA		
1E	NA - Circuit Board			
1F	CO_2	UK		
1G	CO_2	UK		
	Standard solvent	10% (E)		
1H	FINAL PRODUCT			

7.06 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

7.06 (continued)

[1]For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1		
2		
3		
4		
5		

NA

[2]Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

[3]Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 8 RESIDUAL TREATMENT GENERATION, CHARACTERIZATION, TRANSPORTATION, AND MANAGEMENT

General Instructions:

For questions 8.04-8.06, provide a separate response for each residual treatment block flow diagram provided in question 8.01, 8.02 or 8.03. Identify the process type from which the information is extracted.

For questions 8.05-8.33, the Stream Identification Codes are those process streams listed in either the Section 7 or Section 8 block flow diagrams which contain residuals for each applicable waste management method.

For questions 8.07-8.33, if residuals are combined before they are handled, list those Stream Identification Codes on the same line.

Questions 8.09-8.33 refer to the waste management activities involving the residuals identified in either the Section 7 or Section 8 block flow diagrams. Not all Stream Identification Codes used in the sample answers (e.g., for the incinerator questions) have corresponding process streams identified in the block flow diagram(s). These Stream Identification codes are for illustrative purposes only.

For questions 8.11-8.33, if you have provided the information requested on one of the EPA Office of Solid Waste surveys listed below within the three years prior to your reporting year, you may submit a copy or reasonable facsimile in lieu of answering those questions which the survey addresses. The applicable surveys are: (1) Hazardous Waste Treatment, Storage, Disposal, and Recycling Survey; (2) Hazardous Waste Generator Survey; or (3) Subtitle D Industrial Facility Mail Survey.

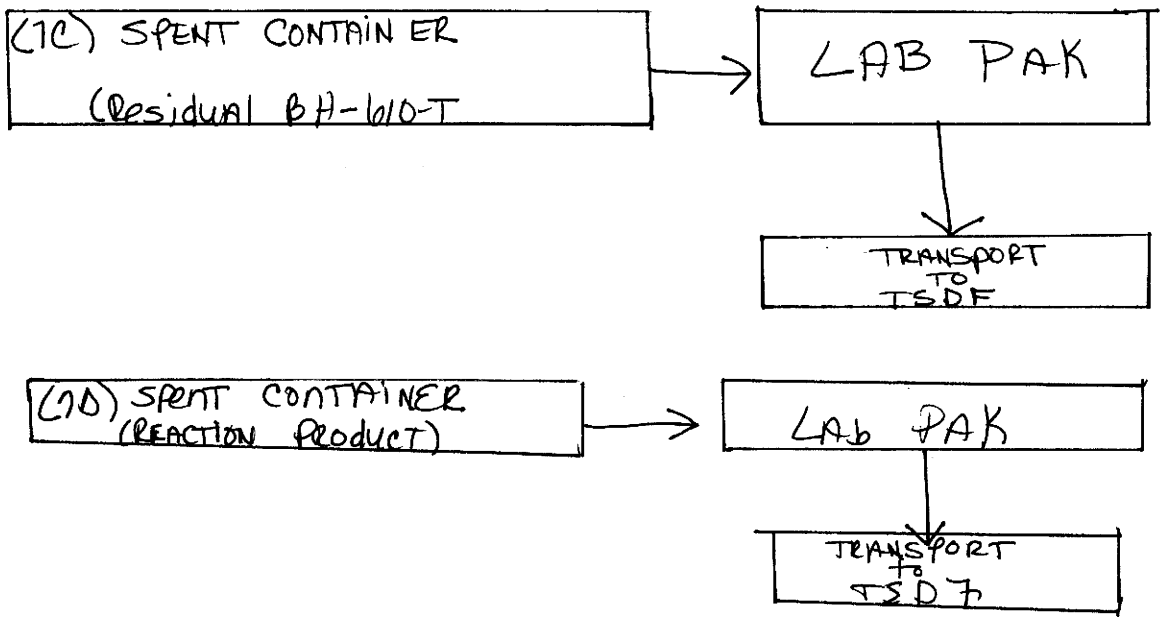
[ ] **Mark (X) this box if you attach a continuation sheet.**

PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

8.01 In accordance with the instructions, provide a residual treatment block flow diagra- which describes the treatment process used for residuals identified in question 7..1

CBI

[ ] Process type ..... Encapsulating



[X] Mark (X) this box if you attach a continuation sheet.

General Instructions:

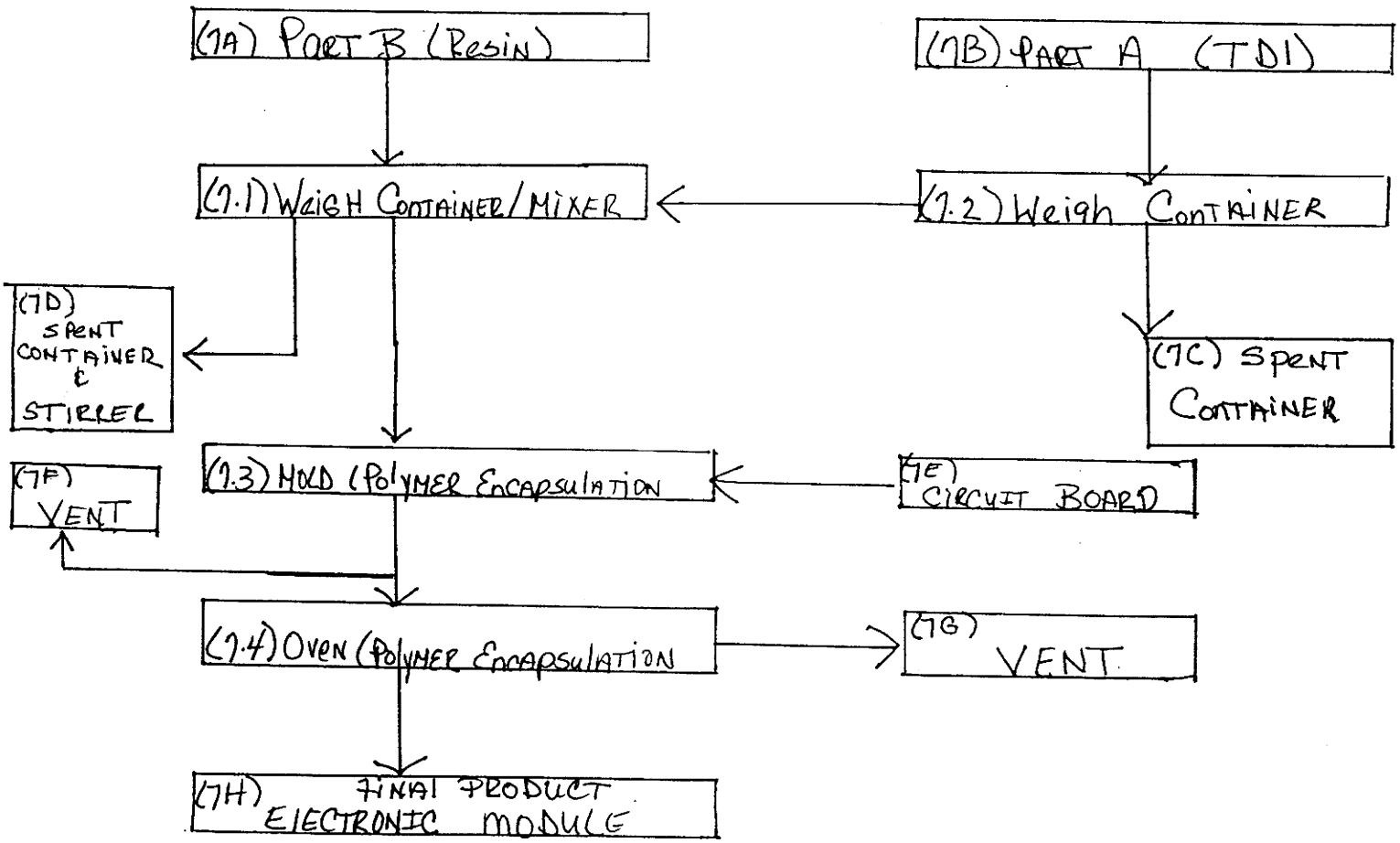
For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

CBI

Process type ..... Encapsulation



[ ] **Mark (X) this box if you attach a continuation sheet.**

8.02 In accordance with the instructions, provide residual treatment block flow diagram(s which describe each of the treatment processes used for residuals identified in question 7.02.

CBI

[ ] Process type ..... _____

[ ] Mark (X) this box if you attach a continuation sheet.

8.03 In accordance with the instructions, provide residual treatment block flow diagram(s) which describe each of the treatment processes used for residuals identified in question 7.03.

CBI

[ ] Process type .....

[ ] Mark (X) this box if you attach a continuation sheet.

8.04 Describe the typical equipment types for each unit operation identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... ENCAPSULATING

Unit Operation ID Number (as assigned in questions 8.01, 8.02, or 8.03)	Typical Equipment Type
7C, 7D	30 gal Poly drum

[ ] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Encapsulating

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
7C	H,R,E,T	OL	2,4-TDI	94%	(UK)	(UK)
7D	H,R,E,T	SO	Polyurethane	UK	UK	UK
			2,4 TDI	UK	UK	UK

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[1]Use the following codes to designate the type of hazardous waste:

I = Ignitable
C = Corrosive
R = Reactive
E = EP toxic
T = Toxic
H = Acutely hazardous

[2]Use the following codes to designate the physical state of the residual:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

8.05 continued below

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.05 (continued)

[3]For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1		
2		
3		
4		
5		

NA

[4]Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[5]Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

[6]Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

NA

Code	Method	Detection Lim (± ug/l)
1		
2		
3		
4		
5		
6		

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than on process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type .....

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
7C	B67/B69	1D or 11I	UK		100%	UK	UK
		NOTE: Residuals are lab packed with other hazardous materials, picked up by a certified haz. waste hauler & transported to a TSD facility					
7D	B82	1D or 11I	UK	100%	—	UK	UK

[1] Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2] Use the codes provided in Exhibit 8-2 to designate the management methods

[ ] Mark (X) this box if you attach a continuation sheet.

PART C TRANSPORTATION OF RESIDUALS TO OFF-SITE FACILITIES

8.07 CBI [ ] Identify any special handling instructions for the residuals identified in your process block or residual treatment block flow diagram(s). (Refer to the instructions for an example.)

Stream ID Code	Special Handling Instructions
	NONE

8.08 CBI [ ] Identify those construction materials that are recommended (compatible) for containing or transporting the listed substance, and those materials that you know could cause a dangerous reaction or significant corrosion (incompatible) if they are used to contain or transport the listed substance.

Stream ID Code	Construction Materials: Compatible Containment Materials	Construction Materials: Incompatible Containment Materials
7C	Steel, metal, poly drum	NA
7D	steel, metal, poly drum	NA

[ ] Mark (X) this box if you attach a continuation sheet.

8.09 Identify each off-site facility (including POTWs) that manages the residuals identified in your process block or residual treatment block flow diagram(s), and th
CBI quantity that each managed during the reporting year. Photocopy this question and complete it separately for each off-site facility.

[ ]

Stream ID Code	Annual Quantity (kg)
7C	UK
7D	UK

Facility Name [C][I][E][A][N][ ][H][A][Z][B][O][E][S][ ][O][F][ ][N][A][T][I][C][K]

Address [1][D][ ][M][E][R][C][E][D][ ][D][O][A][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[N][A][T][I][C][K][ ]
City

[M][A] [0][1][7][6][0]--[ ][ ][ ][ ]
State Zip Code

EPA Identification Number (i.e., Hazardous Waste Facility ID Number) ..... [M][A][D][9][8][0][5][2][3][2][0][3]

[ ] **Mark (X) this box if you attach a continuation sheet.**

PART D ON-SITE RESIDUALS MANAGEMENT INFORMATION

8.10 Identification Permit Numbers -- List any applicable identification or permit numbers for your facility.

EPA National Pollutant Discharge Elimination System (NPDES) Permit No.(s) 005
(discharges to surface water)
ONEIDA County Sewer District

EPA Underground Injection Well (UIC) Permit No.(s) ..... NA
(underground injection of fluids)

EPA Point Source Discharge (PSD) Permit No.(s) ..... NA
(air emissions from point sources)

EPA Hazardous Waste Management Facility Permit No.(s) ..... NA

Other EPA Permits (specify)

_____ ..... NA

_____ .....

_____ .....

[ ] Mark (X) this box if you attach a continuation sheet.

8.11 On-Site Storage or Treatment in Piles -- Complete this table for the five largest (by volume) piles that are used on-site to store or treat the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Pile	Quantity Managed per Year (cubic meters)	Under Roofed Structure (Y/N)	Type of Containment Provided[1]	Synthetic Liner Base (Y/N)[2]	Frequency of Transfer and/or Handling Operations[3]	Stream ID Code
1						
2						
3						
4						
5						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

---

[1]Use the following codes to designate the type of containment provided:

C = Complete (includes both dike containment and underground (leachate) containment)
P1 = Partial-1 (includes just dike containment)
P2 = Partial-2 (includes just underground (leachate) containment)
N = None

[2]Waste may lie directly on the synthetic liner or the liner may be covered with a clay layer

[3]Use the following codes to designate frequency of transfer and/or handling operations:

A = Daily
B = Weekly
C = Monthly
D = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

8.12 On-Site Storage or Treatment in Tanks -- Complete the following table for the five largest (by volume) tanks that are used on-site to store or treat the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Tank	Design Capacity (liters)	Quantity per Year (liters)	Treatment Types[1]	Average Length of Storage (days)	Part of Wastewater Treatment Train (Y/N)[2]	Tank Covered (Y/N)	Type of Containment Provided[3]	Stream ID Code
1								
2								
3								
4								
5								

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

[1]Indicate "S" for storage or use the codes provided in Exhibit 8-3 (which follows question 8.13) to designate treatment types

[2]Treatment train from which wastewater is discharged under a NPDES permit or through a sewer system to a publicly owned treatment works

[3]Use the following codes to designate the type of containment provided:

C = Complete (includes both dike containment and underground (leachate) containment)
P1 = Partial-1 (includes just dike containment)
P2 = Partial-2 (includes just underground (leachate) containment)
N = None

[ ] Mark (X) this box if you attach a continuation sheet.

8.13 On-Site Storage, Treatment, or Disposal in Containers -- Complete the following table for the five largest (by volume) types of free standing containers that are used on-site to store, treat, or dispose of the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

Container	Design Capacity (liters)	Quantity Stored per Year (liters)	Treatment Types[1]	Average Length of Storage (days)	Average Daily Stored Quantity (liters)	Maximum Operational Storage Capacity (liters)	Storage Base Material[2]	Stream ID Code
1	207.9	UK	S	<90 DAYS	5½ Liters	UK	B	7C
2	207.9	UK	S	<90 DAYS	5½ Liters	UK	B	7D
3								
4								
5								

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

(No) ..... (2)

[1]Indicate "S" for storage and use the codes provided in Exhibit 8-3 to designate treatment types

If residual is stored, indicate (Y/N) in parenthesis whether the storage area is designed and operated to collect and contain surface runoff

[2]Use the following codes to designate storage base materials:

A = Concrete
B = Asphalt
C = Soil
D = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

8.14 On-Site Burning in Boilers -- Complete the following table for the five largest (by capacity) boilers that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Boiler	Boiler Type[1]	Average Boiler Load[2] (%)	Average Fuel Replacement Ratio[3] (%)	Stream ID Code
1				
2				
3				
4				
5				

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No .....

[1]Use the following codes to designate boiler type:

F = Fire tube
W = Water tube

[2]Designate the average boiler load when firing residual (percent of capacity)

[3]Designate the average fuel replacement ratio as a percentage (heat-input basis)

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.15 Complete the following table for the five largest (by capacity) boilers that are use on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Boiler	Boiler Heat Capacity (heat input in kJ/hr)	Primary Boiler Fuel[1]
1		
2		
3		
4		
5		

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No .....

---

[1] Use the following codes to designate the primary boiler fuel:

A = Oil
B = Gas
C = Coal
D = Wood
E = Other (specify) _____

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.16 Provide the following information for the residuals identified in your process block or residual treatment block flow diagram(s) that are burned in on-site boilers. Photocopy this question and complete it separately for each boiler.

CBI

[ ] Boiler number ..... _____

Stream ID code(s) ..... _____

NA

	Residual, as Fired (or residual mixture if residuals are blended)	Boiler Fuel, as Fire (residual(s) plus primary fuel)
Btu content (J/kg)		
Average	_____	_____
Minimum	_____	_____
Total halogen content (% by wt.)		
Average	_____	_____
Maximum	_____	_____

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.17 Complete the following table for the five largest (by capacity) boilers that are use on-site to burn the residuals identified in your process block or residual treatmen block flow diagram(s).

CBI

[ ]

Boiler	Stream ID Code	Listed Metal[1]	Total Metal Content (% by weight) Avg.	Max.
1				
2				
3				
4				
5				

NA

Indicate if Office of Solid Waste survey has been submitted in lieu of respon by circling the appropriate response.

Yes .....

No .....

---

[1] A listed metal is either an EP toxic metal or a metal that is included on the California List (as defined in section 3004(d)(2) of the Resource Conservation and Recovery Act)

[ ] Mark (X) this box if you attach a continuation sheet.

8.18 Complete the following table for the five largest (by capacity) boilers that are us on-site to burn the residuals identified in your process block or residual treatme
CBI block flow diagram(s).

[ ]

Boiler	Air Pollution Control Device[1]	Types of Emissions Data Available
1		
2		
3		
4		
5		

NA

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No .....

---

[1] Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)
E = Electrostatic precipitator
O = Other (specify) _____

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.19 Stack Parameters -- Provide the following information for each of the five largest (by capacity) boilers that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each boiler.

CBI

[ ] Boiler number ..... _____

NA

Stack height ..... _____ m

Stack inner diameter (at outlet) ..... _____ m

Exhaust temperature ..... _____ °C

Vertical or horizontal stack ..... _____ (V or H)

Annual emissions for the listed substance ..... _____ kg/yr

Height of attached or adjacent building ..... _____ m

Width of attached or adjacent building ..... _____ m

Building cross-sectional area ..... _____ m^2

Emission exit velocity ..... _____ m/sec

Average emission rate of exit stream ..... _____ kg/min

Maximum emission rate of exit stream ..... _____ kg/min

Average duration of maximum emission rate of exit stream . _____ min

Frequency of maximum emission rate of exit stream ..... _____ times/yea

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No ..... NA .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.20 On-Site Burning in Incinerators -- Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ] NA

Incinerator	Incinerator Type[1]	Primary Incinerator Fuel[2]	Average Fuel Replacement Ratio[3]	Stream ID Code
1				
2				
3				

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

---

[1]Use the following codes to designate the incinerator type:

1I = Liquid injection
2I = Rotary or rocking kiln
3I = Rotary kiln with a liquid injection unit
4I = Two stage
5I = Fixed hearth
6I = Multiple hearth
7I = Fluidized bed
8I = Infrared
9I = Fume/vapor
10I = Pyrolytic destructor
11I = Other (specify) _____

[2]Use the following codes to designate the primary incinerator fuel:

A = Oil
B = Gas
C = Coal
D = Wood
E = Other (specify) _____

[3]Designate the percentage of auxiliary fuel used when firing residual (percent of capacity)

[ ] Mark (X) this box if you attach a continuation sheet.

8.21 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Incinerator	Incinerator Heat Capacity (heat input in kJ/hr)	Feed Type[1]
1		
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No .....

---

[1]Use the following codes to designate feed type:

A = Liquid nozzle type (specify) _____
B = Atomizing pressure (specify) _____
C = Solid-batch charge
D = Solid-continuous charge

[ ] Mark (X) this box if you attach a continuation sheet.

8.22 Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Incinerator	Air Pollution Control Device[1]	Types of Emissions Data Available
1		
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

[1] Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)
E = Electrostatic precipitator
O = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

8.24 Stack Parameters -- Provide the following information on stack parameters for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI Photocopy this question and complete it separately for each incinerator.

[__] Incinerator number ..... _____

N/A

Stack height ..... _____ m

Stack inner diameter (at outlet) ..... _____ m

Exhaust temperature ..... _____ °C

Vertical or horizontal stack ..... _____ (V or H)

Annual emissions for the listed substance ..... _____ kg/yr

Height of attached or adjacent building ..... _____ m

Width of attached or adjacent building ..... _____ m

Building cross-sectional area ..... _____ m^2

Emission exit velocity ..... _____ m/sec

Average emission rate of exit stream ..... _____ kg/min

Maximum emission rate of exit stream ..... _____ kg/min

Average duration of maximum emission rate of exit stream . _____ min

Frequency of maximum emission rate of exit stream ..... _____ times/year

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

N/A

Yes 1

No 2

[__] Mark (X) this box if you attach a continuation sheet.

8.25 Provide the following information on the incinerator feed for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each incinerator.

CBI

[ ] Incinerator number ..... _____

Stream ID code(s) ..... _____

NA

	Residual, as Fired (or residual mixture if residuals are blended)	Incinerator Fuel as Fired (residual(s) plus primary fuel)
Btu content (J/kg)		
Average	_____	_____
Minimum	_____	_____
Feed rate (kg/hr)	_____	_____
Feed rate (J/hr)(kg/hr x J/kg)	_____	_____
Total halogen content (% by weight)		
Average	_____	_____
Maximum	_____	_____
Total ash content (% by weight)		
Average	_____	_____
Maximum	_____	_____
Total water content (% by weight)		
Average	_____	_____
Maximum	_____	_____

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

NA

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.26 Provide the following information on the incinerator feed for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in you process block or residual treatment block flow diagram(s).

CBI

[ ]

Incinerator	Stream ID Code	Listed Metal[1]	Total Metal Content (% by weight) Avg.	Max.
1				
2				
3				

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No .....

[1] A listed metal is either an EP toxic metal or a metal that is included on the California List (as defined in section 3004(d)(2) of the Resource Conservation and Recovery Act)

[ ] Mark (X) this box if you attach a continuation sheet.

8.27 On-Site Storage, Treatment or Disposal in a Land Treatment Site -- Complete the following table for each on-site land treatment site that is used to store, treat, or dispose of the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ] Total area actively used for land treatment ..... _____

Average slope of site (degree incline) ..... _____

Surface water runoff management[1] ..... _____

NA

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes .....

No .....

NA

[1]Use the following codes to describe the management practices for surface water runoff:

A = Collection prior to treatment
B = Reapplication to the site
C = Canalization prior to treatment
D = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

8.28 Complete the following table for the residuals identified in your process block or residual treatment block flow diagram(s) that are managed in an on-site land treatment operation.

CBI

[ ]

NA

Stream ID Code	Year Land Treatment Initiated	Methods Used to Apply Residuals[1]	Application Rate[2]

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No .....

NA

---

[1]Use the following codes to describe the method(s) used to apply residuals to the land treatment site:

A = Surface spreading or spray irrigation without plow or disc incorporation
B = Surface spreading or spray irrigation with plow or disc incorporation to a depth of _____cm
C = Subsurface injection to a depth of _____cm
D = Other (specify) _____

[2]Use the following codes to designate the application rate:

A = Daily
B = Weekly
C = Monthly
D = Other (specify) _____

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.29 On-Site Storage, Treatment, or Disposal in Surface Impoundments -- Complete the following table for the five largest (by volume) surface impoundments that are used on-site to treat, store, or dispose of the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

N/A

Impoundment	Total Capacity (liters)	Specify Storage, Disposal or Treatment Type if Applicable[1]	Average Residency Time (days)[2]	SYNTHETIC LINER		CLAY LINER		LEACHATE COLLECTION SYSTEM		
				No. of Liners	Thickness (cm)[3]	No. of Liners	Thickness (cm)[3]	Installed (Y/N)	Leachate Collected (Y/N)	Stream ID Code
1										
2										
3										
4										
5										

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

N/A

[1]Indicate "S" for storage, "D" for disposal, or use the codes provided in Exhibit 8-3 (which follows question 8.13) to designate treatment type

[2]Indicate the residency time for the surface impoundment's flow through stream. In addition, indicate in parenthesis using the following codes the frequency with which the impoundment is dredged to clear the residue that collects on the bottom:

A = Daily
B = Weekly
C = Monthly
D = Other (specify) _____

[3]Indicate the thickness of each liner

[ ] Mark (X) this box if you attach a continuation sheet.

8.30 On-Site Disposal in Landfill Cells -- Complete the following table for the five largest (by volume) landfill cells that are used on-site to dispose of the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Landfill Cell	Quantity per year (kg)	DRAINAGE LAYER		CLAY LINER		SYNTHETIC LINER			Stream ID Code
		Installed (Y/N)	Thickness (cm)	No. of Liners	Thickness (cm)[1]	No. of Liners	Material	Thickness (cm)[1]	
1									
2									
3									
4									
5									

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response

Yes 1

No 2

NA

[1]Indicate the thickness of each liner

[ ] Mark (X) this box if you attach a continuation sheet.

8.31 State the total area actively used on-site for your landfill.

CBI

[ ] Total area actively used ..... N.A. _____ m^2

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No ..... N.A.

8.32 Complete the following table for the five largest landfill cells (by volume) that contain residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ] N.A.

Landfill Cell	WORKING COVER		CAP DESIGN CLAY LAYER		LEACHATE COLLECTION SYSTEM	
	Average Use[1]	Thickness (cm)	Installed (Y/N)	Thickness (cm)	Installed (Y/N)	Leachate Collected (Y/N)
1						
2						
3						
4						
5						

Indicate if Office of Solid Waste survey has been submitted in lieu of respons by circling the appropriate response.

Yes .....

No ..... N.A.

[1] **Use the following codes to designate the average use rate:**

A = Daily
B = Weekly
C = Monthly
D = Other (specify) _____

[ ] **Mark (X) this box if you attach a continuation sheet.**

8.33 On-Site Disposal in Injection Wells -- Complete the following table for the five largest (by volume) injection wells that are used on-site to dispose of the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

NA

Well	Well Type[1]	Quantity Disposed (liters)[2]	Stream ID Code
1			
2			
3			
4			
5			

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

NA

[1]Use the following codes to designate well type:

A = Wells that dispose below deepest groundwater with <10,000 mg/l of total dissolved solids
B = Wells that dispose into a formation containing groundwater with <10,000 mg/l of total dissolved solids
C = Wells that dispose above all groundwater
D = Other (specify) _____

[2]Indicate the quantity of listed substance disposed

[ ] **Mark (X) this box if you attach a continuation sheet.**

SECTION 9 WORKER EXPOSURE

General Instructions:

Questions 9.03-9.25 apply only to those processes and workers involved in manufacturing or processing the listed substance. Do not include workers involved in residual waste treatment unless they are involved in this treatment process on a regular basis (i.e., exclude maintenance workers, construction workers, etc.).

[ ] Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records on the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the records for that data element are maintained. (Refer to the instructions for further explanation and an example.)

CBI

[ ]

Data Element	Data are Maintained for: Hourly Workers	Data are Maintained for: Salaried Workers	Year in Which Data Collection Began	Number of Years Records Are Maintained
Date of hire	X	X	1952	Permanently
Age at hire	X	X	1952	Permanently
Work history of individual before employment at your facility	X	X	"UK"	"UK"
Sex	X	X	1952	Permanently
Race	X	X	1952	Permanently
Job titles	X	X	1952	Permanently
Start date for each job title	X	X	1952	Permanently
End date for each job title	X	X	1952	Permanently
Work area industrial hygiene monitoring data	X	X	1982	Permanently
Personal employee monitoring data	X	X	1982	Permanently
Employee medical history	X	X	1952	Permanently
Employee smoking history	X	X	"UK"	"UK"
Accident history	X	X	"UK"	Permanently
Retirement date	X	X	1952	Permanently
Termination date	X	X	1952	Permanently
Vital status of retirees	X	X	"NA"	"NA"
Cause of death data	X	X	"NA"	"NA"

[ ] Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

CBI

[ ]

a. Activity	b. Process Category	c. Yearly Quantity (kg)	d. Total Workers	e. Total Worker-Hours
Manufacture of the listed substance	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		
On-site use as reactant	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		
On-site use as nonreactant	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		
On-site preparation of products	Enclosed	NA		
	Controlled Release	NA		
	Open	NA		

[ ] **Mark (X) this box if you attach a continuation sheet.**

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

[ ]

Labor Category	Descriptive Job Title
A	STAKER
B	stenciler
C	banders
D	supervisor
E	electrician
F	plumers
G	
H	
I	
J	

[ ] **Mark (X) this box if you attach a continuation sheet.**

9.04 In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.

CBI

[ ] Process type ..... _____

[ ] Mark (X) this box if you attach a continuation sheet.

9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type .....

Work Area ID	Description of Work Areas and Worker Activities
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

NA

[ ] Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating

Work area ....

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance[1]	Average Length of Exposure Per Day[2]	Number of Days per Year Exposed
A	1	"UK"	OL	"UK"	"UK"
B	1	"UK"	OL	"UK"	"UK"
C	4	"UK"	OL	"UK"	"UK"
D	1	"UK"	OL	"UK"	"UK"
E	14	"UK"	OL	"UK"	"UK"
F	14	"UK"	OL	"UK"	"UK"

[1]Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[2]Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours
D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

[ ] Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulation

Work area .....

Labor Category	8-hour TWA Exposure Level (ppm, mg/m^3, other-specify)	15-Minute Peak Exposure Level (ppm, mg/m^3, other-specify)
A	"UK"	"UK"
B	"UK"	"UK"
C	"UK"	"UK"
D	"UK"	"UK"
E	"UK"	"UK"
F	"UK"	"UK"

[ ] Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table.

CBI

[ ]

Sample/Test	Work Area ID	Testing Frequency (per year)	Number of Samples (per test)	Who Samples[1]	Analyzed In-House (Y/N)	Number of Years Records Maintained
Personal breathing zone						
General work area (air)						
Wipe samples						
Adhesive patches						
Blood samples						
Urine samples						
Respiratory samples						
Allergy tests						
Other (specify) _____						
Other (specify) _____						
Other (specify) _____						

[1]Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist
B = Insurance carrier
C = OSHA consultant
D = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

CBI

[ ]	Sample Type	Sampling and Analytical Methodology

NA

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

CBI

[ ]	Equipment Type[1]	Detection Limit[2]	Manufacturer	Averaging Time (hr)	Model Number

NA

[1]Use the following codes to designate personal air monitoring equipment types:

A = Passive dosimeter
B = Detector tube
C = Charcoal filtration tube with pump
D = Other (specify) _____

Use the following codes to designate ambient air monitoring equipment types:

E = Stationary monitors located within work area
F = Stationary monitors located within facility
G = Stationary monitors located at plant boundary
H = Mobile monitoring equipment (specify) _____
I = Other (specify) _____

[2]Use the following codes to designate detection limit units:

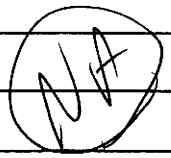
A = ppm
B = Fibers/cubic centimeter (f/cc)
C = Micrograms/cubic meter (μ/m^3)

[ ] Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

CBI

[ ]	Test Description	Frequency (weekly, monthly, yearly, etc.)



[ ] Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulation

Work area .....

Engineering Controls	Used (Y/N)	Year Installed	Upgraded (Y/N)	Year Upgraded
Ventilation:				
Local exhaust	Y	1959	Y	1981
General dilution	N		N	
Other (specify)				
Vessel emission controls	N		N	
Mechanical loading or packaging equipment	N		N	
Other (specify)				

[ ] Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... _____

Work area ..... _____

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)

NA

[ ] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Encapsulating

Work area 1

Equipment Types	Wear or Use (Y/N)
Respirators	N
Safety goggles/glasses	Y
Face shields	N
Coveralls	N
Bib aprons	N
Chemical-resistant gloves	Y
Other (specify)	
Lab Coats	Y

[ ] Mark (X) this box if you attach a continuation sheet.

9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... _____

Work Area	Respirator Type	Average Usage[1]	Fit Tested (Y/N)	Type of Fit Test[2]	Frequency of Fit Tests (per year)

N/A

[1]Use the following codes to designate average usage:

A = Daily
B = Weekly
C = Monthly
D = Once a year
E = Other (specify) _____

[2]Use the following codes to designate the type of fit test:

QL = Qualitative
QT = Quantitative

[ ] Mark (X) this box if you attach a continuation sheet.

9.16 Respirator Maintenance Program -- For each type of respirator used when working with the listed substance, specify the frequency of the maintenance activity, and the person who performs the maintenance activity. Photocopy this question and complete it separately for each respirator type.

Respirator type ..... _____

NA

Respirator Maintenance Activity	Frequency[1]	Person Performing Activity[2]
Cleaning	_____	_____
Inspection	_____	_____
Replacement		
Cartridge/Canister	_____	_____
Respirator unit	_____	_____

[1]Use the following codes to designate the frequency of maintenance activity:

A = After each use
B = Weekly
C = Other (specify) _____

[2]Use the following codes to designate who performs the maintenance activity:

A = Plant industrial hygienist
B = Supervisor
C = Foreman
D = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

9.17 Respirator Training Program -- Describe your respirator training and re-training programs for each type of respirator used when working with the listed substance. Photocopy this question and complete it separately for each respirator type.

a. NA

Respirator type ..... _____

Type of Training[1]	Number of Workers Trained	Location of Training[2]	Length of Training (hrs)	Person Performing Training[3]	Frequenc

b.

Respirator type ..... _____

Type of Re-training[1]	Number of Workers Re-trained	Location of Re-Training[2]	Length of Re-Training (hrs)	Person Performing Re-Training[3]	Frequenc

[1]Use the following codes to designate the type of training or re-training:

E = Emergency
R = Routine

[2]Use the following codes to designate the location of training or re-training:

A = Outside plant instruction
B = In-house classroom instruction
C = On-the-job
D = Other (specify) _____

[3]Use the following codes to designate the person who performs the training or re-training:

A = Plant industrial hygienist
B = Supervisor
C = Foreman
D = Other (specify) _____

[4]Use the following codes to designate the frequency of respirator training or re-training:

A = Monthly
B = Fixed monthly
C = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

9.18 For each type of personal protective clothing and safety equipment used when working with the listed substance, indicate whether you have conducted a permeation test on the clothing or equipment for the listed substance.

Clothing and Equipment	Permeation Tests Conducted (Y/N)
Coveralls	
Bib apron	
Gloves	N
Other (specify)	

[ ] Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

[ ]

Process type ..... Encapsulating

Work area 1

1. Employee training -
2. Local exhaust - Ventilated work area

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type ..... Encapsulating

Work area 1

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping		X		
Vacuuming				
Water flushing of floors				
Other (specify)				
minor wipe-ups	X			

[ ] Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure

Yes .....

(No) .....

Emergency exposure

Yes .....

(No) .....

If yes, where are copies of the plan maintained?

Routine exposure: _____

Emergency exposure: _____

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

(Yes) ..... MSDS .....

No ..... medical .....

If yes, where are copies of the plan maintained? Plant Protection Health & Safety office work area

Has this plan been coordinated with state or local government response organizations Circle the appropriate response.

Yes .....

(No) .....

9.23 **Who is responsible for monitoring worker safety at your facility? Circle the appropriate response.**

(Plant safety specialist .....

Insurance carrier .....

OSHA consultant .....

Other (specify) _____ .....

[ ] **Mark (X) this box if you attach a continuation sheet.**

9.24 Who is responsible for safety and health training at your facility? Circle the appropriate response.

Plant safety specialist 1

Insurance carrier 2

OSHA consultant 3

Other (specify) _____ 4

9.25 Who is responsible for the medical program at your facility? Circle the appropriate response.

Plant physician 1

Consulting physician 2

Plant nurse 3

Consulting nurse 4

Other (specify) _____ 5

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 10 ENVIRONMENTAL RELEASE

General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601, or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than an RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

PART A GENERAL INFORMATION

10.01 Where is your facility located? Circle all appropriate responses.

CBI

[ ] Industrial area .....

Urban area .....

Residential area .....

Agricultural area .....

Rural area .....

Adjacent to a park or a recreational area .....

Within 1 mile of a navigable waterway .....

Within 1 mile of a school, university, hospital, or nursing home facility .....

Within 1 mile of a non-navigable waterway .....

Other (specify) _____ .....

[ ] Mark (X) this box if you attach a continuation sheet.

10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude ..... 043 ° 05 · 13

Longitude ..... 075 ° 17 · 19

UTM coordinates ..... Zone _____, Northing _____, Easting _____

10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information.

Average annual precipitation ..... NA ..... _____ inches/yea

Predominant wind direction ..... _____

10.04 Indicate the depth to groundwater below your facility.

Depth to groundwater ..... 4 meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition o

CBI Y, N, and NA.)

[ ]

On-Site Activity	Environmental Release		
	Air	Water	Land
Manufacturing	NA		
Importing	NA		
Processing	Y	N	N
Otherwise used	NA		
Product or residual storage	N	N	N
Disposal	NA		
Transport	NA		

[ ] Mark (X) this box if you attach a continuation sheet.

10.06 Provide the following information for the listed substance and specify the level of precision for each item. (Refer to the instructions for further explanation and an example.)

CBI

[ ]

Quantity discharged to the air	UK	kg/yr ±	
Quantity discharged in wastewaters		kg/yr ±	0
Quantity managed as other waste in on-site treatment, storage, or disposal units		kg/yr ±	0
Quantity managed as other waste in off-site treatment, storage, or disposal units	UK	kg/yr ±	

[ ] **Mark (X) this box if you attach a continuation sheet.**

10.07 Complete the following table for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

[ ]

Process type ..... Encapsulating

Process Stream ID Code	Media Affected[1]	Average Amount of Listed Substance Released[2]	Number of Batches/Year	Days of Operation/Year
77	A	UK	UK	UK

[1]Use the following codes to designate the media affected:

A = Air
B = Land
C = Groundwater
D = POTW
E = Navigable waterway
F = Non-navigable waterway
G = Other (specify) _____

[2]Specify the average amount of listed substance released to the environment and use the following codes to designate the units used to measure the release:

A = kg/day
B = kg/batch

[ ] Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this questio
CBI and complete it separately for each process type.

[ ] Process type ..... _____

Stream ID Code	Control Technology	Percent Efficienc
77	NONE	
7G	NONE	

[ ] Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

10.09 Point Source Emissions -- Identify each emission point source containing the listed substance in terms of a Stream ID Code as identified in your process block or residual treatment block flow diagram(s), and provide a description of each point source. Do not include raw material and product storage vents, or fugitive emissio sources (e.g., equipment leaks). Photocopy this question and complete it separatel for each process type.

CBI
[ ]

Process type ..... Encapsulating

Point Source ID Code	Description of Emission Point Source
17	work Bench Ventilation System

[X] Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

10.09 Point Source Emissions -- Identify each emission point source containing the liste
substance in terms of a Stream ID Code as identified in your process block or
CBI residual treatment block flow diagram(s), and provide a description of each point
[ ] source. Do not include raw material and product storage vents, or fugitive emissi
sources (e.g., equipment leaks). Photocopy this question and complete it separate
for each process type.

Process type ..... Encapsulation

Point Source ID Code	Description of Emission Point Source
TG	Oven Ventilation

[ ] Mark (X) this box if you attach a continuation sheet.

10.10 Emission Characteristics - - Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

[ ] Mark (X) this box if you attach a continuation sheet.

[ ] Point Source ID Code	Physical State[1]	Average Emissions (kg/day)	Frequency[2] (days/yr)	Duration[3] (min/day)	Average Emission Factor[4]	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)
TF	V	UK	UK	UK	UK	UK	UK	UK

[1]Use the following codes to designate physical state at the point of release:
G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) _____

[2]Frequency of emission at any level of emission

[3]Duration of emission at any level of emission

[4]Average Emission Factor -- Provide estimated (± 25 percent) emission factor (kg of emission per kg of production of listed substance)

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

[ ]

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m)[1]	Building Width(m)[2]	Vent Type[3]
7	6.4	0.457	Ambient	3.3	NA	NA	V
16	6.4	0.457	Ambient	3.3	NA	NA	V

[1]Height of attached or adjacent building

[2]Width of attached or adjacent building

[3]Use the following codes to designate vent type:

H = Horizontal
V = Vertical

[ ] Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source

CBI

[ ]

Point source ID code ..... NA .....

Size Range (microns)	Mass Fraction (% ± % precision)
< 1	
≥ 1 to < 10	
≥ 10 to < 30	
≥ 30 to < 50	
≥ 50 to < 100	
≥ 100 to < 500	
≥ 500	
	Total = 100%

[ ] **Mark (X) this box if you attach a continuation sheet.**

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... _____

Percentage of time per year that the listed substance is exposed to this process type ..... _____

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					
	Less than 5%	5-10%	11-25%	26-75%	76-99%	Greater than 99
Pump seals[1]						
Packed						
Mechanical						
Double mechanical[2]						
Compressor seals[1]						
Flanges						
Valves						
Gas[3]						
Liquid						
Pressure relief devices[4] (Gas or vapor only)						
Sample connections						
Gas						
Liquid						
Open-ended lines[5] (e.g., purge, vent)						
Gas						
Liquid						

NA

[1] List the number of pump and compressor seals, rather than the number of pumps or compressors

10.I3 continued on next page

[ ] Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

[2]If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) that will detect failure of the seal system, the barrier fluid system, or both, indicate with a "B" and/or an "S", respectively

[3]Conditions existing in the valve during normal operation

[4]Report all pressure relief devices in service, including those equipped with control devices

[5]Lines closed during normal operation that would be used during maintenance operations

---

10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

CBI

[ ]

a. Number of Pressure Relief Devices	b. Percent Chemical in Vessel[1]	c. Control Device	d. Estimated Control Efficiency[2]

[1]Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

[2]The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

---

[ ] Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... _____

Equipment Type	Leak Detection Concentration (ppm or mg/m^3) Measured at ____ Inches from Source	Detection Device[1]	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Complete (days after initiated)
Pump seals					
Packed					
Mechanical					
Double mechanical					
Compressor seals					
Flanges					
Valves					
Gas					
Liquid					
Pressure relief devices (gas or vapor only)					
Sample connections					
Gas					
Liquid					
Open-ended lines					
Gas					
Liquid					

NA

[1] Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer
FPM = Fixed point monitoring
O = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

[ ] Mark (X) this box if you attach a continuation sheet.

10.16 Raw Material, Intermediate and Product Storage Emissions - - Complete the following table by providing the information on each liquid raw material, intermediate, and product storage vessel containing the listed substance as identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

Vessel Type[1]	Floating Roof Seals[2]	Composition of Stored Materials[3]	Throughput (liters per year)	Vessel Filling Rate (gpm)	Vessel Filling Duration (min)	Vessel Inner Diameter (m)	Vessel Height (m)	Operating Vessel Volume (l)	Vessel Emission Controls[4]	Design Flow Rate[5]	Vent Diameter (cm)	Control Efficiency (%)	Basis for Estimate[6]

N/A

[1]Use the following codes to designate vessel type:

F = Fixed roof
CIF = Contact internal floating roof
NCIF = Noncontact internal floating roof
EFR = External floating roof
P = Pressure vessel (indicate pressure rating)
H = Horizontal
U = Underground

[2]Use the following codes to designate floating roof seals:

MS1 = Mechanical shoe, primary
MS2 = Shoe-mounted secondary
MS2R = Rim-mounted, secondary
LM1 = Liquid-mounted resilient filled seal, primary
LM2 = Rim-mounted shield
LMW = Weather shield
VM1 = Vapor mounted resilient filled seal, primary
VM2 = Rim-mounted secondary
VMW = Weather shield

[3]Indicate weight percent of the listed substance. Include the total volatile organic content in parenthesis

[4]Other than floating roofs

[5]Gas/vapor flow rate the emission control device was designed to handle (specify flow rate units)

[6]Use the following codes to designate basis for estimate of control efficiency:

C = Calculations
S = Sampling

PART D RELEASE TO WATER

10.17 National Pollutant Discharge Elimination System (NPDES) Discharges -- Complete the following information for each body of water NPDES discharges are discharged into. If discharges are to more than one body of water, photocopy this question and complete it separately for each discharge.

CBI

[ ]

Discharge source (stream ID code) ..... _____

Is discharge to a moving or standing body of water? Circle the appropriate response.

NA

Moving body of water 1

Standing body of water 2

Estimated average base flow (moving) ..... _____ l/day

Estimated average volume (standing) ..... _____ l

Average volume of discharge from facility ..... _____ l/day

_____ days/year

Maximum volume of discharge from facility ..... _____ l/day

_____ days/year

Average concentration of listed substance in discharge .... _____ mg/l or ppm

Maximum concentration of listed substance in discharge .... _____ mg/l or ppm

10.18 Publicly Owned Treatment Works (POTW) -- Complete the following information for discharges containing the listed substance which are discharged to a POTW from your facility.

CBI

[ ] Discharge source (stream ID code) ..... _____

NA

Average volume of discharge from facility ..... _____ l/day

_____ days/year

Maximum volume of discharge from facility ..... _____ l/day

_____ days/year

Average concentration of listed substance in discharge .... _____ mg/l or ppm

Maximum concentration of listed substance in discharge .... _____ mg/l or ppm

[ ] Mark (X) this box if you attach a continuation sheet.

10.19 Nonpoint Sources -- Complete the following information for each nonpoint discharge source. Examples of nonpoint sources include stormwater runoff, waste pile runoff, and runoff from product or raw material storage areas or other sources that contain the listed substance and may be discharged to surface water. Exclude NPDES or POTW discharges. If discharges are to more than one body of water, photocopy this CBI question and complete it separately for each discharge.

[ ] Discharge source (stream ID code) ..... _____

NA

Is discharge to a moving or standing body of water? Circle the appropriate response.

Moving body of water 1

Standing body of water 2

Estimated average base flow (moving) ..... _____ l/day

Estimated average volume (standing) ..... _____ l

Average volume of discharge from facility ..... _____ l/day

_____ days/year

Maximum volume of discharge from facility ..... _____ l/day

_____ days/year

Average concentration of listed substance in discharge .... _____ mg/l or ppm

Maximum concentration of listed substance in discharge .... _____ mg/l or ppm

[ ] **Mark (X) this box if you attach a continuation sheet.**

10.20 Releases to Soils -- Complete the following information for up to three random soi core samples that were taken and analyzed for the listed substance during the reporting year. Report the concentrations of the listed substance determined by soil core monitoring studies/tests. Specify the distance from the facility that soil cores were taken, and indicate the soil type and sample depth of the soil cores. (Refer to the glossary for definitions of soil textures given in foo note 2.)

CBI

[ ]

NA

Sample	Concentration (ug/kg) of Listed Substance (± % precision)	Distance from Plant (m)[1]	Soil Texture[2]	Sample Depth (c
1				
2				
3				

[1]Use the following code to designate if the sample was taken within the facility's boundary:

OS = On-site

[2]Use the following codes to designate soil texture:

A = Sand	G = Sandy clay loam
B = Loamy sand	H = Clay loam
C = Sandy loam	I = Silty clay loam
D = Loam	J = Sandy clay
E = Silty loam	K = Silty clay
F = Silt	L = Clay

10.21 Releases to Groundwater -- Complete the following information for up to three rando samples of groundwater from monitoring wells during the reporting year that were analyzed for the listed substance. The average and maximum concentration refers t the listed substance.

CBI

[ ]

NA

Sample	Distance from Plant (m)[1]	Well Depth (m)	Average Concentration (mg/l) (± % precision)	Maximum Concentratio (mg/l) (± % precisio
1				
2				
3				

[1]Use the following code to designate if the sample was taken within the facility's boundary:

OS = On-site

[ ] Mark (X) this box if you attach a continuation sheet.

10.22 Releases to Drinking Water -- Complete the following table for up to three samples from drinking water wells monitored during the reporting year. The average and maximum concentration refers to the listed substance.

CBI

[ ]

Well	Well Depth (m)	Distance from Plant (m)[1]	Average Concentration (mg/l) (± % precision)	Maximum Concentration (mg/l) (± % precision)
1				
2				
3				

[1] Use the following code to designate if the sample was taken within the facility's boundary:

OS = On-site

[ ] Mark (X) this box if you attach a continuation sheet.

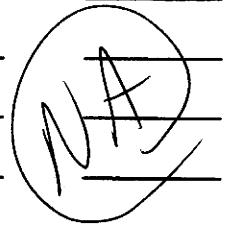
PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

Release	Date Started	Time (am/pm)	Date Stopped	Time (am/pm)
1				
2				
3				
4				
5				
6				

10.24 Specify the weather conditions at the time of each release.

Release	Wind Speed (km/hr)	Wind Direction	Humidity (%)	Temperature (°C)	Precipitation (Y/N)
1					
2					
3					
4					
5					
6					



[ ] Mark (X) this box if you attach a continuation sheet.

10.25 Complete the following information for each media into which the listed substance was released. Any volatile substance that was released to land, but that was expected to volatilize, should be listed as a release to air.

Release No. ..... _____

Media	Quantity (kg)	Method of Release	Migration Beyond Boundaries (Y/N)	Quantity Migrated (kg)
Land				
Air				
Groundwater				
Surface water				

10.26 Specify the physical state and concentration of the listed substance at the time and point of release.

Release No. ..... _____

Point of release ..... _____

Physical state ..... _____

Concentration (%) ..... _____

[ ] Mark (X) this box if you attach a continuation sheet.

10.27 Circle all appropriate responses relating to the cause and the effects of the release.

Release No. ..... _____

Cause of Release

Equipment failure .....

Operator error .....

Bypass condition .....

Upset condition .....

Fire .....

Unknown .....

Other (specify) _____ .....

Results of Release

Spill .....

Vapor release .....

Explosion .....

Fire .....

Other (specify) _____ .....

[ ] Mark (X) this box if you attach a continuation sheet.

10.28 Specify which authorities were notified of the release.

Release No. .....

a. Federal

Agency [ ]

Office [ ]

Contact Person [ ]

Address [ ]
Street

[ ]
City

[ ][ ]
State

Telephone Number ..... [ ][ ][ ]-[ ][ ][ ]-[ ][ ][ ][ ]

Date Notified ..... [ ][ ] [ ][ ] [ ][ ]
Mo. Day Year

Time Notified ..... [ ][ ][ ][ ] am/p

b. State

Agency [ ]

Office [ ]

Contact Person [ ]

Address [ ]
Street

[ ]
City

[ ][ ]
Stat

Telephone Number ..... [ ][ ][ ]-[ ][ ][ ]-[ ][ ][ ][ ]

Date Notified ..... [ ][ ] [ ][ ] [ ][ ]
Mo. Day Year

Time Notified ..... [ ][ ][ ][ ] am/

10.28 continued below

[ ] **Mark (X) this box if you attach a continuation sheet.**

10.28 (continued)

c. Local

Agency [_]

N/A

Office [_]

Contact Person [_]

Address [_]
Street

[_]
City

[_][_]
State

Telephone Number .... [_][_][_]-[_][_][_]-[_][_][_][_]

Date Notified .... [_][_] [_][_] [_][_]
Mo. Day Year

Time Notified .... [_][_][_][_] am/pm

10.29 For each of the proximities listed below, indicate whether the population living within that proximity was notified of, or evacuated because of the release. Specify who notified the population, the number of people evacuated, if any, and the date and time of day the evacuation began.

Release No. .... ______

N/A

Proximity to the Release	Notified of Release (Y/N)	Notifying Person	Notifying Person's Telephone Number	Area Evacuated (Y/N)	Number of Persons Evacuated	Date and Time of Day Evacuation Began
1/4 mile						
1/2 mile						
1 mile						
Other (specify)						

[_] **Mark (X) this box if you attach a continuation sheet.**

10.30 Specify the number of personal injuries or casualties resulting from the release.

Release No. ..... _____

Number of injuries to facility employees ..... N/A _____

Number of injuries to general population ..... _____

Number of deaths to facility employees ..... _____

Number of deaths to general population ..... _____

10.31 Indicate who conducted cleanup activities, and the dates over which the cleanup was performed.

Release No. ..... N/A _____

Name [_]

Address [_]
Street

[_]
City

[_][_] [_][_][_][_][_]--[_][_][_][_]
State Zip

Telephone Number ..... [_][_][_]-[_][_][_]-[_][_][_][_]

Date Cleanup Initiated ..... [_][_][_][_]
Mo. Year

Date Cleanup Completed (or expected) ..... [_][_][_][_]
Mo. Year

10.32 **Briefly describe the release prevention practices and policies (backup systems, containment systems, training programs, etc.) in place at the facility at the time the release occurred.**

Release No. ..... _____

N/A

[_] Mark (X) this box if you attach a continuation sheet.

10.33 Indicate which of the prevention practices and policies listed in question 10.32 were ineffective in preventing the release from reaching the environment.

Release No. .....

NA

10.34 Describe all repairs and/or preventive measures (management practices, operational changes, etc.) made to equipment or operations as a result of the release.

Release No. .....

NA

10.35 Describe additional preventive measures that will be taken to minimize the possibilities of recurrence.

Release No. .....

NA

[ ] Mark (X) this box if you attach a continuation sheet.

APPENDIX I: List of Continuation Sheets

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

Question Number (1)	Continuation Sheet Page Numbers (2)
1.16	9 + 9A
1.17	10 + 10A
3.01	21 + 21A
4.06 - 4.15	28-34 H
7.03	44 + 44A
8.01	50 & 42
10.09	113 & 113A
APPENDIX II	113 & 113A

[ ] Mark (X) this box if you attach a continuation sheet.

APPENDIX II: Substantiation Form and Instructions to Accompany Claims of Confidentiality Under the Comprehensive Assessment Information Rule (CAIR)

If you assert one or more claims of confidentiality for information submitted on a Comprehensive Assessment Information Rule (CAIR) form, please answer, pursuant to 40 CFR 740.219, all the following questions in the space provided. Type all responses. If you need more space to answer a particular question, please use additional sheets. If you use additional sheets, be sure to include the section, number, and (if applicable) subpart of the question being answered, and write your facility's name and Dun & Bradstreet Number in the lower right-hand corner of each sheet. A completed copy of this form must accompany all submissions containing one or more claims of confidentiality. Failure to do so will result in the waiver of your claim of confidentiality.

EPA has identified six information categories as those which encompass all claims of confidentiality. These are: Submitter identity (h); Substance identity (i); Volume manufactured, imported, or processed (j); Use information (k); Process information (l); and Other information (m). Respondents who assert a CBI claim on the reporting form must mark the letter(s) (h through m) that represent(s) the appropriate category(ies) of confidentiality in the box adjacent to the question, and answer the questions in this form.

Respondents who assert a CBI claim for information submitted under CAIR must also provide EPA with sanitized and unsanitized versions of their submissions. The unsanitized version must be complete and contain all information being claimed as confidential. The sanitized copy must contain only information not claimed as confidential. EPA will place the second copy of the submission in the public file. Failure to submit the second copy of the form at the time the respondent submits the reporting form containing confidential information or after receipt of a notice from EPA thereafter will result in a waiver of the respondent's claim of confidentiality.

Please indicate the CAS Registry Number (if known) or chemical name (if the CAS Registry Number is not known) for the substance that is the subject of this form:

584-84-9

If you are reporting on a tradename, please provide the tradename for the substance that the subject of this form:

Stepanfoam BH-610-T

Does this form contain CBI? [ ] Yes [X] No

If the answer to this question is yes, you must bracket the text claimed as CBI. Any unbracketed information may be placed in the public file.

[X] Mark (X) this box if you attach a continuation sheet.

APPENDIX II: Substantiation Form and Instructions to Accompany Claims of Confidentiality Under the Comprehensive Assessment Information Rule (CAIR)

If you assert one or more claims of confidentiality for information submitted on a Comprehensive Assessment Information Rule (CAIR) form, please answer, pursuant to 40 CFR 740.219, all the following questions in the space provided. Type all responses. If you need more space to answer a particular question, please use additional sheets. If you us additional sheets, be sure to include the section, number, and (if applicable) subpart o the question being answered, and write your facility's name and Dun & Bradstreet Number the lower right-hand corner of each sheet. A completed copy of this form must accompany all submissions containing one or more claims of confidentiality. Failure to do so will result in the waiver of your claim of confidentiality.

EPA has identified six information categories as those which encompass all claims o confidentiality. These are: Submitter identity (h); Substance identity (i); Volume manu factured, imported, or processed (j); Use information (k); Process information (l); and Other information (m). Respondents who assert a CBI claim on the reporting form must mar the letter(s) (h through m) that represent(s) the appropriate category(ies) of confidentiality in the box adjacent to the question, and answer the questions in this form.

Respondents who assert a CBI claim for information submitted under CAIR must also provide EPA with sanitized and unsanitized versions of their submissions. The unsanitize version must be complete and contain all information being claimed as confidential. The sanitized copy must contain only information not claimed as confidential. EPA will place the second copy of the submission in the public file. Failure to submit the second copy the form at the time the respondent submits the reporting form containing confidential information or after receipt of a notice from EPA thereafter will result in a waiver of respondent's claim of confidentiality.

Please indicate the CAS Registry Number (if known) or chemical name (if the CAS Registry Number is not known) for the substance that is the subject of this form:

584-84-9

If you are reporting on a tradename, please provide the tradename for the substance that the subject of this form:

CONASTIC AD-20 PART A

Does this form contain CBI? [ ] Yes [X] No

If the answer to this question is yes, you must bracket the text claimed as CBI. Any unbracketed information may be placed in the public file.

[ ] Mark (X) this box if you attach a continuation sheet.

A. All Claims. Respondents who assert any CBI claims must answer the following question in addition to the appropriate questions from sections B through G, below:

(1) For what period do you assert a claim of confidentiality? If a claim is to extend until a certain event or point in time, please indicate that event or time period. If the period indicated is longer than 2 calendar years, explain why. If different periods of protection are required for different categories of information, please so indicate.

NA

(2) Has the information that you are claiming as confidential been or will it be disclosed to individuals outside your company?

[ ] Yes [ ] No

If so, what, if any, restrictions apply to the use or further disclosure of the information?

NA

(3) Briefly describe the physical and procedural restrictions, if any, within your company on the use and storage of the information you are claiming as confidential. What other steps have you taken to prevent the undesired disclosure of the information by others?

NA

(4) Does the information you are claiming as confidential appear or is it referred to in advertising, promotional, or safety materials for the substance or an end-product containing the substance?

[ ] Yes [ ] No

Does it appear or is it referred to in professional or trade publications?

[ ] Yes [ ] No

If so, indicate why the information should nonetheless be considered confidential.

[ ] Mark (X) this box if you attach a continuation sheet.

(5) If the information you wish to claim as confidential were to be disclosed to the public by EPA, how much difficulty would a new competitor have in entering the market for this substance, considering such constraints as capital and marketing costs, specialized marketing expertise, or unusual production processes?

NA

(6) Has EPA, another Federal agency, or a Federal Court made any pertinent confidentiality determinations for information regarding this substance?

[ ] Yes [ ] No

If so, please identify the entity and provide EPA with copies of such determinations.

B. Submitter Identity (code h). Respondents who assert CBI claims for submitter identity must also answer the following questions:

(1) Approximately how many competitors do you have in the market for this substance or the final product containing this substance?

(2) What harm, if any, would result from EPA's disclosure of the submitter identity? Provide detailed descriptions of both the probable harm from disclosure and the causal relationship between disclosure and harm.

(3) If you have also asserted a claim of confidentiality for substance identity, what harm to your company's competitive position would result from disclosure of your company's identity if the substance identity were to remain confidential?

NA

[ ] **Mark (X) this box if you attach a continuation sheet.**

C. Substance Identity (code i). Specific substance identity can be claimed as confidential only if that substance identity is confidential for purposes of the TSCA Chemical Substance Inventory. Respondents who assert CBI claims for substance identity must also answer the following questions:

(1) (a) Has the substance been patented or disclosed in a patent in the U.S. or elsewhere?

[ ] Yes [ ] No

If so, indicate the relevant patent(s) and the reasons why the substance identity should nonetheless be considered confidential.

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(b) Exactly what information which does not appear in the patent would be disclosed to competitors by releasing the specific substance identity? Explain in detail how competitors could use this information.

(c) Since the patent provides protection for the substance, why are you asserting confidentiality?

(2) (a) In what form (i.e., product, effluent, emission, etc.) does this substance leave your site?

(b) What measures have you taken to guard against the discovery of the substance identity by others?

[ ] Mark (X) this box if you attach a continuation sheet.

(c) If the substance is formulated with other chemicals, list them, and state the concentration of the claimed substance in the mixture.

(3) (a) If the substance leaves the site in a product that is available to the public or your competitors, can the substance be identified by analysis of the product?

[ ] Yes [ ] No

(b) Is it likely that a competitor has attempted or will attempt to chemically analyze the substance?

[ ] Yes [ ] No

(c) Would the cost and difficulty of such analysis be great or small? Why?

(4) What harm, if any, would result from EPA's public disclosure of the specific chemical identity? Provide detailed descriptions of both the probable harm to your company from disclosure and the causal relationship between release and harm.

(5) Would public disclosure of the specific chemical identity reveal to your competitors the use of the substance or the process by which this substance is manufactured?

[ ] Mark (X) this box if you attach a continuation sheet.

D. Volume Manufactured, Imported, or Processed (code j). Respondents who assert CBI claims for volume manufactured, imported, or processed must also answer the following questions:

(1) If you have also claimed submitter's name as confidential and EPA keeps confidential the link between your company identity and the volume manufactured, imported, or processed your identity will not be associated in any way with that volume. In this case, what harm to your company's competitive position would result from disclosing that volume? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

(2) If you have also claimed substance identity as confidential and EPA keeps confidential the link between the substance identity and the volume manufactured, imported, or processed, the substance identity will not be associated in any way with that volume. In this case, what harm to your company's competitive position would result from disclosing that volume? How could a competitor use that information? What is the causal relationship between the disclosure and the harm?

(3) If you have claimed neither submitter nor substance identity as confidential, what harm, if any, would result from release of your volume manufactured, imported, or processed? Provide a detailed description of both the harm and the causal relationship between disclosure and harm.

E. Use Information (code k). Respondents who assert CBI claims for use information must also answer the following questions:

(1) If you have also claimed submitter identity as confidential and EPA keeps confidential the link between your company identity and the use data, your identity will not be associated in any way with the use data. In this case, what harm to your competitive position would result from disclosing the use data? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

[ ] Mark (X) this box if you attach a continuation sheet.

(2) If you have also claimed substance identity as confidential and EPA keeps confidenti the link between the substance identity and the use data, the substance identity will not be associated in any way with the use data. In this case, what harm to your company's competitive position would result from disclosing the use data? How could a competitor u this information? What is the causal relationship between the disclosure and the harm?

(3) If you have claimed neither submitter nor substance identity as confidential, what harm, if any, would result from release of your use information? Provide a detailed description of both the harm and the causal relationship between disclosure and harm.

F. Process information (code 1). Respondents who assert CBI claims for process information must also answer the following questions:

(1) If you have also claimed submitter identity as confidential and EPA keeps confidenti the link between your company identity and process information, your identity will not be associated in any way with this information. In this case, what harm to your competitive position would result from disclosing the process information? How could a competitor us this information? What is the causal relationship between the disclosure and the harm?

(2) If you have also claimed substance identity as confidential and EPA keeps confidenti the link between the substance identity and the process information, the substance identi will not be associated in any way with the process information. In this case, what harm your company's competitive position would result from disclosing the process information? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

[ ] Mark (X) this box if you attach a continuation sheet.

(3) If you claimed neither submitter nor substance identity as confidential, what harm, any, would result from release of your process information? Provide a detailed descripti of both the harm and the causal relationship between the disclosure and the harm.

G. Other information (code m). Respondents who assert CBI claims using the "other information" category, must also answer the following questions:

(1) Is the item confidential in and of itself, or is it confidential because it will reveal some other confidential information, whether or not that other information is reported on this form? If the latter, what is the information that will be revealed, and how would disclosure of the item in turn lead to disclosure of the other information?

(2) Describe with specificity the harm to your company's competitive position which woul result from disclosing the information.

(3) If you have also claimed submitter identity as confidential and EPA keeps confidenti the link between your company identity and this information, your identity will not be associated in any way with the item claimed. In this case, what harm to your competitive position would result from disclosing the item? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

(4) If you have also claimed substance identity as confidential and EPA keeps confidenti the link between the substance identity and the item, the substance identity (other than category name) will not be associated in any way with the item claimed. In this case, wh harm to your company's competitive position would result from disclosing the item? How could a competitor use this information? What is the causal relationship between the disclosure and the harm?

[ ] **Mark (X) this box if you attach a continuation sheet.**

I certify that I have personally examined and am familiar with the information submitted this CBI Substantiation Form and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

ROBERT A. MACIEL — NAME

Robert A. Maciel — SIGNATURE

13 DEC 1990 — DATE SIGNED

SR. ENVIRONMENTAL ENGINEER — TITLE

(315) 793 - 5678 — TELEPHONE NO.

[ ] Mark (X) this box if you attach a continuation sheet.